# DVHA Routing Form

Revision Date 5/1/12

Type of Agreement: **Contract** Agreement #: **23701** Form of Agreement: **Amendment** Amendment #: **3**

Name of Recipient: **CGI Technologies Solutions, Inc.** Vendor #: **12725**

Program Manager : **Justin Tease** Phone #: **802-585-5155**

Agreement Manager: **Emily Trantum** Phone #: **802-879-5946**

Brief Explanation of Agreement: **Decrease the maximum amount, revise the scope of work, and revise critical milestones**

Start Date: **December 17, 2012** End Date: **December 31, 2014** Maximum Amount: **83,998,004.77**

Amendments Only: Maximum Prior Amount: **91,399,449.64** Percentage of Change: **-8.00%**

Bid Process (Contracts Only): ☒ Standard ☐ Simplified ☐ Sole Source ☐ Statutory ☐ Master Contract SOW

Funding Source

| | | | |
|---|---|---|---|
| **General Fund** | **$2,519,940.14** | **ACA Exchange 93.525** | **81,478,064.63** |
| | | | |
| | | | |

Contents of Attached Packet

☒ AA-14 ☒ Attachments A, B, C & F ☐ Attachment G - Academic Research

☐ Sole Source Memo ☒ Attachment D - Modifications to C & F ☐ MOU

☒ Qualitative/Justification Memo ☒ Attachment E - Business Associate Agreement ☒ Other: **Base, Amendment 1 & 2**

| Reviewer | | Reviewer Initials | Date In | Date Out |
|---|---|---|---|---|
| DVHA Grant & Contract Administrator | **Kate Jones** | K.J. | | |
| DVHA BO | **Jill Gould** | J.G. | | |
| DVHA Commissioner or Designee | **Mark Larson, Commissioner** | M.L. | | |
| AHS Attorney General | **Jaye Johnson** | | | |
| Following Approvals for Contracts Only: | | | | |
| AHS CIO | **Darin Prail** | D.P. | | |
| AHS Central Office | **Diane Nealy** | D.N. | | |
| AHS Secretary | **Doug Racine, Sec** | D.R. | | |

Vision Account Codes:

☐ FFATA Entry ☐ Grant Tracking Module Vision PO #: Initials & Date: Approval & B/C:

**STATE OF VERMONT CONTRACT SUMMARY AND CERTIFICATION - - - - - - - - - - - Form AA-14 (8/22/11)**

**Note: All sections are required. Incomplete forms will be returned to department.**

## I. CONTRACT INFORMATION:

**Agency/Department:** AHS/ DVHA **Contract #:** 23701 **Amendment #:** 3

**Vendor Name:** CGI Technologies Solutions, Inc. VISION Vendor No: 12725

Vendor Address: 4050 Legato Road, Fairfax, VA 22033

**Starting Date:** 12/17/2012 **Ending Date:** 12/31/2014 **Amendment Date:** 8/8/2013

**Summary of agreement or amendment:** Decrease the maximum amount, revise the scope of work, and revise critical milestones

## II. FINANCIAL INFORMATION

Maximum Payable: $83,998,004.77 Prior Maximum: $ 91,399,449.64 Prior Contract # (If Renewal):

Current Amendment: $-7,401,444.87 Cumulative amendments: $ 41,527,657.77 % Cumulative Change: 97.78 %

**Business Unit(s):** 3410; ; - [notes: ] **VISION Account(s): 507600;**

## II. PERFORMANCE INFORMATION

Does this Agreement include Performance Measures tied to Outcomes and/or financial reward/penalties? ☒ Yes ☐ No

Estimated Funding Split: G-Fund 3.00 % S-Fund % F-Fund 97.00 % GC-Fund % Other %

## III. PUBLIC COMPETITION

The agency has taken reasonable steps to control the price of the contract or procurement grant and to allow qualified organizations to compete for the work authorized by this contract. The agency has done this through:

☒ Standard bid or RFP ☐ Simplified Bid ☐ Sole Sourced ☐ Qualification Based Selection ☐ Statutory

## IV. TYPE OF AGREEMENT & PERFORMANCE INFORMATION

Check all that apply: ☐ Service ☒ Personal Service ☐ Architect/Engineer ☐ Construction ☐ Marketing ☒ Information Technology ☐ Other, describe:

## V. SUITABILITY FOR CONTRACT FOR SERVICE

☒ Yes ☐ No ☐ n/a If this is a Personal Service contract, does this agreement meet all 3 parts of the "ABC" definition of independent contractor? (See Bulletin 3.5) If NO, then contractor must be paid through Payroll

## VI. CONTRACTING PLAN APPLICABLE:

Are one or more contract or terms & conditions provisions waived under a pre-approved Contracting Plan? ☐ Yes ☒ No

## VII. CONFLICT OF INTEREST

By signing below, I certify that no person able to control or influence award of this contract had a pecuniary interest in its award or performance, either personally or through a member of his or her household, family, or business.

☐ Yes ☒ No Is there an "appearance" of a conflict of interest so that a reasonable person may conclude that this party was selected for improper reasons: (If yes, explain)

## VIII. PRIOR APPROVALS REQUIRED OR REQUESTED

☒ Yes ☐ No Agreement must be approved by the Attorney General under 3 VSA §311(a)(10) (personal service)

☐ Yes ☒ No I request the Attorney General review this agreement as to form

No, already performed by in-house AAG or counsel: Mintz Levin (initial)

☒ Yes ☐ No Agreement must be approved by the Comm. of DII; for IT hardware, software or services and Telecommunications over $100,000

☐ Yes ☒ No Agreement must be approved by the CMO; for Marketing services over $15,000

☐ Yes ☒ No Agreement must be approved by Comm. Human Resources (privatization and retiree contracts)

☒ Yes ☐ No Agreement must be approved by the Secretary of Administration

## IX. AGENCY/DEPARTMENT HEAD CERTIFICATION; APPROVAL A.P. D.P. D.N.

*I have made reasonable inquiry as to the accuracy of the above information:*

E-SIGNED by Mark Larson on 2013-08-07 21:58:07 GMT

Date Agency / Department Head

E-SIGNED by Doug Racine on 2013-08-11 16:07:50 GMT

Date Agency Secretary or Other Department Head (if required)

Date Approval by Attorney General

Date Approved by Commissioner of Human Resources

R.B.

Date CIO Date CMO

E-SIGNED by Michael Clasen on 2013-08-12 19:30:31 GMT

Date Secretary of Administration

VERMONT

**State of Vermont**
**Department of Vermont Health Access**
312 Hurricane Lane, Suite 201
Williston VT 05495-2807
**dvha.vermont.gov**

*Agency of Human Services*
[Phone] 802-879-5900
[Fax] 802-879-5651

**MEMORANDUM**

**To:** Jeb Spaulding, Secretary of Administration M.C.
**From:** Mark Larson, Commissioner of Department of Vermont Health Access M.L.
**Re:** CGI Technologies & Solutions, Inc., Contract # 23701, Amendment 3
Duration: 12/17/12 – 12/31/14
Proposed Value of Contract: $83,998,004.77

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This memo requests an expedited review for contract #23701, Amendment 3 with CGI Technologies & Solutions Inc. The Vermont Health Connect (formerly Health Benefit Exchange) requires a robust set of core technical capabilities and capacity to provide a solid foundation that will support the healthcare vision embodied by the State of Vermont. CGI was selected by the Department of Vermont Health Access (DVHA) and Department of Information and Innovation (DII) to build the technology infrastructure for the Vermont Health Connect. This amendment provides further clarity and refinement of the components and services required to deliver this technology infrastructure.

Areas that have been addressed in this amendment include:

- Revised technical requirements to support required system functionality.
- Enhanced service levels to ensure ongoing system support meets State of Vermont expectations.
- An adjustment to infrastructure components to ensure the system delivers the required performance, capacity, and reliability.
- Pricing adjustments reflecting changes to the required infrastructure.
- Changes to the Critical Milestones to better reflect the project timeline.
- Changes to the Limits of Liability to reduce the State of Vermont's financial exposure to unforeseen issues.

This contract complies with all mandatory provisions of AOA Bulletin 3.5. Funding for this agreement will be covered by Federal enhanced funding. DVHA looks forward to approval of this agreement.

**AMENDMENT NO. 2**

**TO**

**MASTER SERVICES AGREEMENT**

This Amendment No. 2 ("Amendment No. 2"), effective as of August 12, 2013 (the "Amendment No. 2 Effective Date"), is made to that certain Master Services Agreement (the "Agreement") first dated as of December 13, 2012, as amended February 28, 2013, by and between State of Vermont ("SOV") and CGI Technologies and Solutions Inc. ("Supplier", and together with SOV the "Parties"). Unless otherwise defined herein, capitalized terms used herein shall have the meanings given to such terms in the Agreement.

WHEREAS, the Parties have determined that a change of Supplier's scope of work is in their respective interests; and

WHEREAS, the Parties have agreed to remove from Statement of Work No. 1 and define the scope of the hosting services in a new Statement of Work No. 4;

WHEREAS, the Parties wish to amend the Agreement to reflect amendments resulting from the expansion of Supplier's scope of work;

NOW, THEREFORE, in consideration of the promises herein contained and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, and intending to be legally bound hereby, the Parties agree as follows:

1. Exhibit C to the Agreement is hereby deleted in its entirety and replaced with the Exhibit C attached hereto as Attachment 1.

2. Exhibit D to the Agreement is hereby deleted in its entirety and replaced with the Exhibit D attached hereto as Attachment 2.

3. Exhibit E to the Agreement is hereby deleted in its entirety and replaced with the Exhibit E attached hereto as Attachment 3.

4. Exhibit F to the Agreement is hereby deleted in its entirety and replaced with the Exhibit F attached hereto as Attachment 4.

5. The following assumption is hereby deleted from Exhibit E, and is added to a new section 1.1.7 in Exhibit I – Hosting Services:

   1.1.7 Hardware and Software Assumptions

   If it is mutually agreed that a third party software product is not needed to meet Exchange requirements, the software can be removed from the Exchange solution. This does not affect Supplier's obligation to meet all requirements of the Project.

6. Exhibit L to the Agreement is hereby deleted in its entirety and replaced with the Exhibit L attached hereto as Attachment 5.

Except as modified by this Amendment No. 2, all provisions of the Agreement remain in full force and effect. This Amendment No. 2 is integrated into and forms part of the Agreement as of the Amendment No. 2 Effective Date.

**IN WITNESS WHEREOF** the parties have executed this Amendment No. 2 as of the Amendment No. 2 Effective Date.

**STATE OF VERMONT**

**By:** E-SIGNED by Mark Larson on 2013-08-13 21:18:15 GMT

**Name:** _____

Type or Print

**Title:** _____

**CGI TECHNOLOGIES AND SOLUTIONS INC.**

**By:** E-SIGNED by Gregg Mossburg on 2013-08-13 20:15:05 GMT

**Name:** _____

Type or Print

**Title:** _____

**ATTACHMENT 1**

Exhibit C

[see attached]

**ATTACHMENT 2**

Exhibit D

[see attached]

**ATTACHMENT 3**

Exhibit E

[see attached]

**ATTACHMENT 4**

Exhibit F

[see attached]

**ATTACHMENT 4**

Exhibit L

[see attached]

## Exhibit C - Critical Milestones

1. **Liquidated Damages.** Each party agrees that the failure by Supplier to meet each Critical Milestone (as defined below) will cause SOV to suffer substantial damages which are difficult to estimate. Each party represents after all diligence it has determined appropriate, that the liquidated damages set forth below ("**Liquidated Damages**") are reasonable estimates of the damages which SOV will suffer for a failure to meet each Milestone set forth below ("**Critical Milestones**"), and agrees that the Liquidated Damages are not a penalty. Each party agrees that the Liquidated Damages are intended to be reasonable estimates of the actual damages that SOV would suffer, and are enforceable, valid and binding upon it. In the event that SOV elects to seek actual damages consistent with the terms of the MSA for Supplier's failure to meet one or more Critical Milestones, any Liquidated Damages paid in connection with such Critical Milestones shall be deducted from any damages award. If any Liquidated Damages are held to be unenforceable, then such Liquidated Damages shall be deemed deleted from this Exhibit C, and SOV shall have the right to recover such damages as it is able to recover under the MSA.

2. **Go-Live.** For clarity and without limitation, the failure to meet the Go-Live date of October 1, 2013 is not subject to Liquidated Damages, and SOV shall have the right to recover such damages as it is able to recover consistent with the terms of the MSA for any such failure.

3. **Excused Delay.** Notwithstanding anything to the contrary herein, Supplier shall not be liable for Liquidated Damages under this Exhibit C to the extent that the failure to meet any Critical Milestone is attributable in any material respect to the failure of SOV or SOV Third Party Resources to perform their obligations as set forth in the MSA (including this Statement of Work) or that arise out of causes beyond the reasonable control and without any material error, negligence or breach of Supplier's obligations under the MSA (including this Statement of Work) of Supplier or Supplier Third Party Resources, provided that:

   a. Supplier provides written notice of the delay or failure promptly after first learning of the same describing the cause of such delay or failure in reasonable detail and includes it on all subsequent red-yellow-green reports until it is resolved, and escalates the matter to the SOV Deputy Commissioner of the Exchange within the Department of Vermont Health Access if any such delay is not redressed within two (2) weeks of such written notice from Supplier; and

   b. Supplier takes all reasonable efforts to avoid and minimize the impact of such failure by SOV or SOV Third Party Resources or such causes.

4. **Cap on Liquidated Damages.** In no event shall Supplier's total aggregate liability for all Liquidated Damages assessed under this Exhibit C exceed 10% of the Base Years Grand Total (as defined in Exhibit L (Pricing) in the Table entitled "Summary Cost SOW#1 and SOW#4") (the "Liquidated Damages Cap"). The parties acknowledge and agree that the Liquidated Damages Cap will increase or decrease consistent with any increase or decrease in the total Base Years Grand Total.

5. **Final Critical Milestones.** The date by which each Critical Milestone must be met is detailed in the chart below. Determination of whether a Critical Milestone has been met will be made at the SOV's discretion.

| | Critical Milestone | HBE Project Date | Proposed Measures (if any) | Liquidated Damages |
|---|---|---|---|---|
| 1 | Functionality demonstrated for PM Exchange Components (e.g. QHP Evaluation and Certification, Issuer Portal) | 04/5/2013 | | Medium |
| 2 | Functionality demonstrated for E&E Exchange Components (e.g. enrollment processing, verification interfaces, rate calculator) | 04/5/2013 | | Medium |
| 3 | Functionality demonstrated for FM Exchange Components (APTC/CSR data reporting, SHOP and individual premium billing) | 04/5/2013 | | Medium |
| 4 | Functionality demonstrated for systems supporting Consumer Assistance functions (e.g. CRM, portal access) | 04/5/2013 | | Medium |
| 5 | Development of PM Exchange components completed based on completion of Unit Test and migration to Integration instance. | 06/3/2013 | | High |
| 6 | Development of FM Exchange components completed based on completion of Unit Test and migration to Integration instance. | 06/3/2013 | | High |

| | Critical Milestone | HBE Project Date | Proposed Measures (if any) | Liquidated Damages |
|---|---|---|---|---|
| 7 | Development of E&E Exchange components completed based on completion of Unit Test and migration to Integration instance. | 06/3/2013 | | High |
| 8 | Development of CA Exchange components completed based on completion of Unit Test and migration to Integration instance. | 06/3/2013 | | High |
| 9 | Connectivity established for all required Data Services Hub services | 06/3/2013 | | High |
| 10 | Hub and partner testing on all Data Services Hub services completed | 06/3/2013 | | Low |
| 11 | Iteration 1 VHC Code Drop/Demo and UAT Start | July 29, 2013 | 20% of October 1 requirements met in code promoted to Staging, SOV Testers have access to UAT | Low |
| 12 | Iteration 2 VHC Code Drop/Demo and UAT Start | August 19, 2013 | 60% of October 1 requirements met in code promoted to Staging, SOV Testers have access to UAT | Medium |
| 13 | Iteration 3 VHC Code Drop/Demo and UAT Start | September 9, 2013 | 90% of October 1 requirements met in code promoted to Staging, SOV Testers have access to UAT | High |
| 14 | SIT 1 Complete | August 15, 2013 | 12% of October 1 scripts pass; IV&V assessment as to whether the test cycle complied with the test plan, the appropriate activities took place and testing was performed in the TEST environment; should material deficiencies be identified in assessment, CGI will correct and resubmit. | Low |

| | Critical Milestone | HBE Project Date | Proposed Measures (if any) | Liquidated Damages |
|---|---|---|---|---|
| 15 | SIT 2 Complete | September 5, 2013 | 45% of October 1 scripts pass with fewer than 20 Severity 1 defects; IV&V assessment as to whether the test cycle complied with the test plan, the appropriate activities took place and testing was performed in the TEST environment should material deficiencies be identified in assessment, CGI will correct and resubmit. | Medium |
| 16 | SIT 3 Complete | September 20 2013 | 85% of October 1 scripts pass with no Severity 1 defects; IV&V assessment as to whether the test cycle complied with the test plan, the appropriate activities took place and testing was performed in the TEST environment should material deficiencies be identified in assessment, CGI will correct and resubmit. | High |
| 17 | Blueprint Testing | September 6 2013 | IV&V sign-off on results | High |
| 18 | IRS Safeguards compliance (ACA/IRS 1075) | September 15, 2013<br>(or soonest IRS can audit) | Audit compliance results with no material unresolvable findings or weaknesses | High |
| 19 | PCI DSS compliance | September 18, 2013 | Audit compliance as indicated by a PCI DSS Attestation of Compliance for Onsite Assessments — Merchants, Version 2.0 form signed by a CGI officer | High |
| 20 | Referentia Test Complete and Accepted by 3rd Party | September 18, 2013 | 3rd party acceptance | Medium |
| 21 | Web Site and Call Center Launch | October 1, 2013 | 100% of requirements as defined in the RTM (D-14) in production, inclusive of any changes in scope mutually reviewed and accepted by both SOV and CGI via the Change Control Board (CCB) process or through mutually agreed upon contingency plans. | High |

CGI and SOV agree to negotiate in good faith additional milestones for delivery after October 1, 2013.

6. **Amount of Liquidated Damages.** The parties agree that the amount of damage to SOV will be as follows:

For Critical Milestones categorized as Low:

- $3,750 for every day late from 1 to 3 days late per Critical Milestone;
- $7,500 for every day late from 4 to 7 days late per Critical Milestone;
- $10,000 for every date late from 8 to 14 days late per Critical Milestone;
- $25,000 for every day late after 14 days late per Critical Milestone.

For Critical Milestones categorized as Medium:

- $9,375 for every day late from 1 to 3 days late per Critical Milestone;
- $18,750 for every day late from 4 to 7 days late per Critical Milestone;
- $25,000 for every day late from 8 to 14 days late per Critical Milestone;
- $62,500 for every day late after 14 days late per Critical Milestone.

For Critical Milestones categorized as High:

- $18,750 for every day late from 1 to 3 days late per Critical Milestone;
- $37,500 for every day late from 4 to 7 days late per Critical Milestone;
- $50,000 for every day late from 8 to 14 days late per Critical Milestone;
- $125,000 for every day late after 14 days late per Critical Milestone.

As provided for in Section 5, the total Liquidated Damages assessed under this Exhibit C shall not exceed the Liquidated Damages Cap.

7. **Payment.** Supplier shall pay any Liquidated Damages due to SOV hereunder within 30 days of the date on which the applicable Critical Milestone was originally due to be met, or, at SOV's option, such amounts may be deducted from all or any portion of the Charges payable to Supplier in accordance with the MSA. SOV shall notify Supplier in writing before SOV deducts such sums from the Charges.

8. **Earnback.** If Supplier meets all criteria for the Go Live Launch of the Exchange by October 1, 2013, then Supplier will be entitled to earn back fifty percent (50%) of the Liquidated Damages paid to SOV under this Exhibit C. The Supplier's earn back of Liquidated Damages is not a waiver by SOV of any right it may have under the Agreement.

9. **Modification or Waiver.** Any Liquidated Damages payable under this Exhibit C, including the Critical Milestones, dates for completion and amounts of Liquidated Damages, may be changed at any time by written agreement of the parties, but only by means of a Change Order. The parties further agree that the applicability of the Liquidated Damages to the performance of a Critical Milestone may be waived by SOV in any given instance, but only pursuant to a written waiver signed by the Commissioner of Vermont Health Access.

10. **Acceptance Criteria.** Supplier and SOV will mutually agree upon the framework and measures that will be established in the Go-Live deliverable (D-30 (or32)) by August 23, 2013.

# Exhibit D

## Service Levels

**1.** Generally. The Exchange and associated Hosting Services (together, the "System") have been designed and will be implemented and operated to run in compliance with the Service Levels set forth in this Section. For avoidance of doubt, the Supplier commitments in this Exhibit D are in addition to and not in lieu or limitation of any Supplier obligations in the MSA. Capitalized terms not defined in this Exhibit D will have the definitions assigned to them in the MSA. References to "Problem Levels" in the MSA shall be deemed to be references to the "Severity Levels" in this Exhibit D as defined below.

**2.** Summary Table. The following Service Levels and Service Level Credits apply to the Hosting Services (as defined in Statement of Work No. 4 to the MSA), subject to the provisions set forth herein.

| **Service Level Agreement (SLA)** | **Service Level** | **Service Credit for Failure** |
|---|---|---|
| Supplier WAN Network Latency | Service Level: 95% within 100ms<br><br>Egregious Service Level: 98% within 139ms | For each day:<br><br>$3500<br><br>Egregious: $5,000<br><br>(only one credit shall apply) |
| Availability During All Hours | Production: 99.90%<br>Egregious: 94%<br><br>Non-Production: 99.5%<br>Non-Production Egregious: 94% | For each hour:<br>$3,500<br>Egregious: $5,000 |
| Content Maintenance | Timely Updating of Production Content Per Agreed Schedule | $1,500 for each Scheduled Update |
| Web Page Response Time | Production: Maximum of 1 second average | For each day: $1,000 |
| | Egregious:<br>Maximum of 5 second average in any hour 3 times in any day<br>OR<br>Maximum of 5 second average in any hour 10 times in a week | Egregious: $5,000 each day or week |
| Response Time for Real Time Transactions | Production: 90% within 5 seconds | For each day:<br>$1,000 |
| | Egregious:<br>75% within 5 seconds or any greater than 10 seconds | Egregious:<br>For each day: $5,000 |

| Service Level Agreement (SLA) | Service Level | Service Credit for Failure |
|---|---|---|
| | | |
| | | |
| Help Desk Mean Time to Restore Severity Level 1 | 4 Hours | $5,000 per day |
| | Egregious: Any greater than 24 Hours | $500 per hour |
| Help Desk Mean Time to Restore Severity Level 2 | 8 Hours | $5,000 per day |
| | Egregious: Any greater than 5 days | Egregious: $500 per hour |
| Help Desk Mean Time to Resolve Severity Level 3 | 24 Business Hours unless waived by SOV according to agreed plan identified and agreed as part of problem restore activities. Daily update on status. | $500 per day after the first 24 Business Hours |
| | | |
| Help Desk Mean Time to Resolve Severity Level 4 | 40 Business Hours unless waived by SOV according to agreed plan identified and agreed as part of problem restore activities. Daily update on status. | $300 per day after the first 24 Business Hours |

| | | |
|---|---|---|
| Backup and Recovery | All daily and weekly backups executed successfully<br>1 hour recovery start, 4 hour completion | $500 Each missed daily Backup<br>$2,500 Each missed weekly Backup<br>$500 Each late Recovery<br>$2,500 Each failed Recovery |
| | Egregious: Failure of any 3 consecutive backups or recoveries | Egregious: $15,000 |
| Batch Completion | Completion of critical time sensitive batch processes complete within agreed timeframes to be collectively defined and agreed during design phase. | $2,500 each violation |
| | Egregious: TBD Completion | Egregious: $5,000 |
| Disaster Recovery | 4 Hour RTO, 30 Minute RPO | $100,000 each violation |

3. Service Level Descriptions.

**3.1 Supplier WAN Network Latency**

**(a) Definitions.**

(i) "**Latency**" is defined as the One-way latency from source to destination plus the One-way latency from the destination back to the source.

(ii) "**One-way Latency**" is defined as the time from the source sending a packet to the destination receiving it.

(b) **Description of Service Level**. This Service Level measures daily average Latency.

(c) **Measurement.** Each day, through an agreed automated process, Supplier will sample Latency no less frequently than every five (5) minutes and compile daily statistics. The source point and the receiving point used in taking the measurement will be designated by SOV.

(d) **Service Level Credit.** The Service Level Credit in the Summary Table above will be multiplied by each day that the average is above the Service Level. The Egregious Service Level Credit will be multiplied by each day that the average is above the Egregious Service Level.

**3.2 Availability During All Hours**

**(a) Definitions.**

(i) "**Availability**" means the availability for use by intended individual users, System processes or interfacing systems of all features, functions and processes of the System.

(ii) "**All Hours**" means: All time 7 x 24 each week.

(iii) **"Business Hour"** means the hours from 9:00 AM to 5:00 PM Eastern Time, Monday through Friday.

(iv) **"Minor Maintenance Window"** means every three weeks from 9pm Saturday to 9am Sunday. System Availability will be unaffected during Minor Maintenance Windows. Supplier shall provide SOV notice at least ten (10) days in advance of any Minor Maintenance Window in which Supplier may perform any System maintenance.

(v) **"Major Maintenance Window"** means every three weeks from 9pm Saturday to 9am Sunday and will be subject to notice requirements for Scheduled Maintenance.

(vi) **"Scheduled Maintenance"** means System maintenance described in written notice from Supplier at least thirty (30) days in advance for a Major Maintenance Window that may require unAvailability that is performed within the Minor or Major Maintenance Windows and in accordance with such notice from Supplier, and for which Supplier timely posts a notice of Scheduled Maintenance on the Exchange website according to agreed procedures agreed in writing by Supplier and SOV.

(vii) **"Scheduled Maintenance Downtime"** means any period of unAvailability for Scheduled Maintenance.

(b) **Measurement.** The System will be configured to alarm the unAvailability of any key aspect of the System, and in addition, any unAvailability reported through the Help Desk will be included in the calculations of Availability from the time the unAvailability was first known by Supplier either through alarms, the knowledge of its personnel or a report by SOV or another user. Supplier will use reasonable efforts during the Statement of Work Term to expand the monitoring capabilities of the System to automatically detect unAvailability of any aspect reported hereunder but not detected by the System automatically. This Service Level will be determined by dividing the number of hours of Availability in the month by the total hours in the month. However, Major Maintenance Window Scheduled Maintenance Downtime will not be included in the calculations for the numerator or the denominator to determine performance on this Service Level

(c) **Service Level Credit.** The Service Level Credit will be determined by taking the difference between the required number of hours of Availability in the month and the actual number of hours of Availability during the month, and if a positive number, multiplying the difference (if any) (rounded to the next highest full hour) by the Service Level Credit amount set forth in the Summary Table.

**3.3 Content Maintenance**

(a) **Definitions.**

(i) **"Content"** means all information and materials to be posted on the Exchange website.

(b) **Description of Service Level.** The parties will establish an update schedule for updating the Content on the Exchange website. The Service Level measures compliance with each update required under that schedule (each is a "**Scheduled Update**").

(c) **Measurement.** Each Scheduled Update is required to be completed no later than the date and time scheduled, with all Content set for that Scheduled Update successfully updated on the Exchange website.

(d) **Service Level Credit.** The Service Level Credit in the Summary Table above will be multiplied by the number of Scheduled Updates not completed on time during the month.

**3.4 Web Page Response Time**

(a) **Definitions.**

(i) **"Web Page"** means an individual document created in HTML that is displayed when a user visits the web page's uniform resource locator address.

(ii) **Description of Service Level.** This Service Level measures daily average time that the Web Pages comprising the Exchange website take to respond to a request sent by a user through the user's browser.

(iii) **Measurement.** Each day, through an agreed automated process, Supplier will sample Web Page responses on no less frequently than every five (5) minutes and compile hourly and daily statistics for specific Web Pages designated by SOV and an aggregate average response time.

(iv) **Service Level Credit.** The Service Level Credit in the Summary Table above will be multiplied by each day that the average is above the Service Level. The Egregious Service Level Credit will be paid for each time that the Egregious Service Level is exceeded for the hourly averages in a day or in a week, as applicable, measured for this Service Level.

### 3.5 Response Time for Real Time Transactions

(a) **Definitions.**

(i) **"Real Time Transaction"** means a transaction between a user of the Exchange website and the Exchange where data is sent from the user after logging in to the user's account and requires processing by the Exchange and a response to the user.

(b) **Description of Service Level.** This Service Level measures daily average time that the Web Pages comprising the Exchange website take to respond to a request sent by a user through the user's browser.

(c) **Measurement.** Each day, through an agreed automated process, Supplier will sample Real Time Transactions on no less frequently than every five (5) minutes and compile daily statistics for specific Real Time Transactions designated by SOV and an aggregate average response time.

(d) **Service Level Credit.** The Service Level Credit in the Summary Table above will be multiplied by each day that the average is above the Service Level. The Egregious Service Level Credit will be multiplied by each day that the average is above the Egregious Service Level.

### 3.6 Help Desk Mean Time to Resolve Severity Level 1

(a) **Definitions.**

(i) **"Severity Level 1 Incident"** means an Incident that is characterized by the following attributes: the Incident (a) renders a business critical System, Service, Software, Equipment or network component un-Available, substantially un-Available or seriously impacts normal business operations, in each case prohibiting the execution of productive work, and (b) affects either (i) a group or groups of people, or (ii) a single individual performing a critical business function.

(ii) **"Incident"** means any malfunction or defect that causes or is likely to cause or result in the System to fail to conform to the Requirements.

(iii) **"Restore"** means that Supplier has done one of the following: (i) Correct the Incident to restore the System to normal functionality in conformity with the Requirements; (ii) Provide a Workaround; or (Iii) Correct a portion of the Incident to reduce the Severity Level.

(iv) "**Workaround**" means a temporary fix that is reasonably acceptable to SOV and that does not resolve the underlying problem, but provides the proper results required of the System (through manual processing or otherwise).

(b) **Description of Service Level.** This Service Level measures the mean time for Supplier to Restore the System from the time the Severity Level 1 Incident is first reported to or discovered by Supplier.

(c) **Measurement.** Supplier's trouble ticketing system will automatically track the time from initiation of the Incident to closure. The Incident ticket will be initiated immediately upon Supplier becoming aware of the Incident. Supplier will notify SOV of the Incident within fifteen (15) minutes of the Severity Level 1 Incident ticket creation by telephone, email or other confirmed means.

(d) **Service Level Credit.** The Service Level Credit in the Summary Table above will be multiplied by each day that the average is above the Service Level. The Egregious Service Level Credit will be multiplied by each hour that is above the Service Level.

### 3.7 Help Desk Mean Time to Resolve Severity Level 2

(a) **Definitions.**

(i) **"Severity Level 2 Incident"** means an Incident that is characterized by the following attributes: the Incident (a) does not render a business critical System, Service, Software, Equipment or network component un-Available or substantially un-Available, but a function or functions are not Available, substantially Available or functioning as they should, in each case prohibiting the execution of productive work, and (b) affects either (i) a group or groups of people, or (ii) a single individual performing a critical business function.

(b) **Description of Service Level.** This Service Level measures the mean time for Supplier to Restore the System from the time the Severity Level 2 Incident is first reported to or discovered by Supplier.

(c) **Measurement.** Supplier's trouble ticketing system will automatically track the time from initiation of the Incident to closure. The Incident ticket will be initiated immediately upon Supplier becoming aware of the Incident. Supplier will notify SOV of the Incident within one (1) hour of the Severity Level 2 Incident ticket creation by telephone, email or other confirmed means.

(d) **Service Level Credit.** The Service Level Credit in the Summary Table above will be multiplied by each day that the average is above the Service Level. The Egregious Service Level Credit will be multiplied by each hour that is above the Service Level.

### 3.8 Help Desk Mean Time to Resolve Severity Level 3

(a) **Definitions.**

(i) **"Severity Level 3 Incident"** means an Incident that is characterized by the following attributes: the Incident causes a group or individual to experience

a Incident with accessing or using a System, Service, Software, Equipment or network component or a key feature thereof and a reasonable workaround is not available, but does not prohibit the execution of productive work.

(ii) **"Resolve"** means that Supplier has fixed the root cause of the Incident and removed any Workaround and that SOV has determined that the state reported in the Incident no longer exists.

(b) **Description of Service Level.** This Service Level measures the mean time for Supplier to Resolve Severity Level 3 Incidents from the time first reported to or discovered by Supplier.

(c) **Measurement.** Supplier's trouble ticketing system will automatically track the time from initiation of the Incident to closure. The Incident ticket will be initiated immediately upon Supplier becoming aware of the Incident. Supplier will notify SOV of the Incident within four (4) hours of the Severity Level 3 Incident ticket creation by telephone, email or other confirmed means.

(d) **Service Level Credit.** The Service Level Credit in the Summary Table above will be multiplied by each day that the average is above the Service Level. The Egregious Service Level Credit will be multiplied by each hour that is above the Service Level.

### 3.9 Help Desk Mean Time to Resolve Severity Level 4

(a) **Definitions.**

(i) **"Severity Level 4 Incident"** means an Incident that is characterized by the following attributes: the Incident may require an extended resolution time as set forth in the chart above, but does not prohibit the execution of productive work and a reasonable workaround is available.

(b) **Description of Service Level.** This Service Level measures the mean time for Supplier to Resolve Severity Level 4 Incidents from the time first reported to or discovered by Supplier.

(c) **Measurement.** Supplier's trouble ticketing system will automatically track the time from initiation of the Incident to closure. The Incident ticket will be initiated immediately upon Supplier becoming aware of the Incident. Supplier will notify SOV of the Incident within eight (8) hours of the Severity Level 4 Incident ticket creation by telephone, email or other confirmed means.

(d) **Service Level Credit.** The Service Level Credit in the Summary Table above will be multiplied by each day that the average is above the Service Level. The Egregious Service Level Credit will be multiplied by each hour that is above the Service Level.

### 3.10 Backup and Recovery

(a) **Definitions.**

(i) "Backup" means a copy of the data stored in the System used for Recovery purposes. Daily Backups shall commence after 12:00 AM and shall conclude before 4:00 AM.

(ii) **"Recovery"** means the loading of data from a Backup into the appropriate database of the System.

(b) **Description of Service Level.** This Service Level measures completion of the scheduled Backups and of all necessary Recoveries each month.

(c) **Measurement.** All Backups and Recoveries will be monitored by the System and completion and failure automatically reported. Time for each Recovery will be measured by the System from start to completion and reported automatically.

(d) **Service Level Credit.** The Service Level Credit in the Summary Table above will be multiplied by failure to complete the Backup each day that the average is above the Service Level. The Egregious Service Level Credit will be paid for each time that the Egregious Service Level is exceeded.

**3.11 Batch Completion**

(a) **Definitions.**

(i) **"Batch"** means a scheduled program that runs without user intervention. Supplier will maintain a list of all Batch jobs run by the System.

(b) **Description of Service Level.** This Service Level measures completion of scheduled Batch jobs.

(c) **Measurement.** All Batch jobs will be monitored by the System and completion and failure automatically reported.

(d) **Service Level Credit.** The total number of Batch jobs completed each day will be divided by the total Batch jobs for the day, and if that quotient is less than the Service Level, Service Level Credit will be paid for that day. The Egregious Service Level Credit will be paid for each time that the Egregious Service Level is exceeded.

**3.12 Disaster Recovery**

(a) **Definitions.**

(i) **"Disaster"** means a Force Majeure Event or other circumstance causing any part of the System to be unAvailable and requiring that any portion of the System be moved to another data center to restore full Availability.

(ii) **"RPO"** means the Recovery Point Objective, the maximum period for lost data in the event of a Disaster.

(iii) **"RTO"** means the Recovery Time Objective, the maximum time to recovery all System Availability at another data center after a Disaster.

**(b) Description of Service Level.** In the event of a Disaster, Supplier will meet the RPO and RTO to recover the System and restore full Availability.

**(c) Measurement.** The Service Level will be measured from the declaration of a Disaster pursuant to agreed procedures until full System Availability has been restored.

**(d) Service Level Credit.** The Service Level Credit will be paid for each failure to meet the RPO or the RTO.

**4. Cap on Service Level Credits.** In no event shall the total Service Level Credits for the Hosting Services exceed twenty percent (20%) of the total amount billed each month for such Services. Provided, that if any amount of Service Level Credits is excluded as a result of this cap, any Earn Back Credits will be reduced by the amount of such exclusion; provided that Service Credits for Disaster Recovery shall not count against the cap set forth herein.

**5. Commencement.** The Hosting Services Service Levels apply beginning on Go-Live.

**6. Exclusions.** Supplier's failure to meet any Service Level will be excused, and not counted in the calculation of any Service Level (in a manner that excludes the failure in every respect so that Supplier is neither better nor worse off in Service Level calculations because of such failure) to the extent that Supplier's failure is caused by one of the following circumstances, so long as Supplier uses reasonable efforts to avoid and minimize such failure as applicable and consistent with its obligations under this MSA ("**Exclusions**"): (i) acts, errors and omissions of SOV or any of SOV's suppliers or contractors including but not limited to any breach, failure or delay by SOV, SOV's suppliers or contractors to timely and effectively satisfy their responsibilities under this MSA (or agreements with SOV related to the same) and to provide timely decisions and approvals as required under this MSA; (ii) a Force Majeure Event (subject to compliance by Supplier with its obligations arising under this MSA in connection with such Force Majeure Event); (iii) any circumstance where Supplier is prohibited by applicable Law from taking actions required to correct such failure so long as Supplier has provided prompt notice to SOV of the basis and extent of such prohibition and has proposed appropriate efforts to address the same for approval by SOV; (iv) service or resource reductions requested or approved by SOV and agreed to by the parties through the Change Control Procedures; or (v) if any of the assumptions set forth in a Statement of work are exceeded and through the Change Control Procedures the Parties identify additional hardware, software, or telecommunications resources required to meet SOV's needs the costs for which are additional Charges under such Statement of Work, and for which SOV does not agree to such change and does not approve the addition of such resources (and payment of such additional Charges). For clarity, adverse performance of the components of the System is not a Force Majeure Event. If the same incident causes multiple Service Levels to be missed, Supplier shall only pay to SOV the highest applicable Service Level Credit associated with the root cause generating such missed Service Level (as opposed to a Service Level Credit for each single missed Service Level).

**7. Service Level Credits**

**7.1 Calculation.** Service Level Credits will be calculated as set forth in each Summary Table and the other provisions of this Exhibit D. Service Level Credits will be determined each calendar month during which Service Levels apply.

**7.2 Earn-Back.** If in any month Supplier pays Service Level Credits for any failure to meet any Hosting Service Levels (but not any month in which it pays any Egregious Violation Service Level Credits) (such Service Level Credits are the "**Earn Back Credits**"), and for the next three (3) months Supplier does not owe any Service Level Credits, then Supplier will be credited with the Earn Back Credits to offset against any future Service Level Credits for that category (but not Egregious Service Level Credits). For clarity, the Earn Back Credits will not be paid in cash, and if this Statement of Work terminates with Supplier having a balance in Earn Back Credits, such Earn Back Credits will expire and have no force or effect.

**7.3 Payment.** Service Level Credits accruing in one month will be automatically offset against the following month's invoice.

**8. SLA Reports.** Supplier will provide the following SLA reports for each calendar month no later than the 15th day of the following calendar month:

**8.1 Compliance.** Supplier will provide a monthly SLA compliance report described in a form acceptable to SOV. Each monthly SLA compliance report will report on SLA compliance in both raw form (without taking into account any Exclusions) and then adjusted (taking into account any Exclusions), each of which will be clearly explained in reasonable detail in the monthly SLA compliance report.

**8.2 Incidents.** Supplier will provide a monthly report summarizing the incidents reported during the month by Severity Level, and their resolution, and root cause determinations for each.

**8.3 Trending.** Supplier will provide monthly, quarterly and annual SLA trending reports requested by SOV.

**8.4 Analysis and Recommendations.** At least every six (6) months, Supplier will provide a brief analysis of its SLA performance and recommendations for improvement of its performance.

**8.5 Special.** Supplier will provide such other information regarding SLAs, performance of the System and Services and other metrics as SOV may request from time to time.

**9. Raw Data.** Supplier will make available to SOV an electronic version of all raw data used to create the SLA report each month

**10. Termination.** Pursuant to Section 26.2(c) of the MSA, SOV's right to terminate thereunder includes the following:

**10.1 Repeat SLA Violations.** SOV will have such right if Supplier fails any of the same SLA for three (3) consecutive months or any four (4) months in any twelve (12) month period or if Supplier fails at least three (3) SLAs in each of three (3) consecutive months or any four (4) months in any twelve (12) month period.

**10.2 Egregious SLA Violations.** SOV will have such right in the event of any Egregious violation. The definition of Egregious violations herein is not intended to set the bounds of a material breach of the MSA, and the parties agree that such definitions will not be used to limit the scope of the definition of a material breach of this Agreement. Each Egregious

violation sets forth a Service Level Credit, and for each violation, SOV may elect to terminate under this Section, or receive that Service Level Credit, but not both.

**10.3 Timing of Termination.** If SOV elects to exercise the termination rights stated in this Section, SOV must elect such right within twenty (20) business days of SOV's delivery of written notice to Supplier of the applicable violation.

# EXHIBIT E – SCOPE ASSUMPTIONS

The following assumptions are intended to augment the RTM and assist the SOV in understanding the basis Supplier has developed with regard to defining the Project scope, timing, resources, roles and responsibilities, and cost. Any required changes to these assumptions will be addressed by the Parties through the Change Control Procedures.

These Scope Assumptions are part of the Master Services Agreement (MSA).

## 1.1.1. General Project Assumptions

The project under SOW No. 1 (the "Project") began on December 17, 2012. The project team will be co-located in the Williston area at a location to be provided by the SOV.

- Elaboration Assumptions.
  - Prototypes will be demonstrated to selected super users on an ad hoc scheduling basis.
  - Iterative development will include functionality that can be built during the allotted timeframe as defined in the WBS, defined as deliverable D-01 (Baseline Schedule – WBS).
  - Subsequent iterations will include further refinements to previous iteration functionality as time allows as defined in the Project Work Plan.
  - All prototype workshops will take place at a single location and make use of web conferencing to provide access to users who cannot attend workshops directly.

During testing (of all testing types), defects will be classified by the SOV and Supplier collaborating in good faith. If the Parties disagree as to a classification, then SOV's classification will govern. Defects will be classified as follows:

| Level | Category | Description |
|---|---|---|
| 1 | Sev1 | **Essential Business Process Affected** - Any highly critical system or service outage that results in loss or severe degradation of material business processes and/or capabilities, including those that are defined as "must have" in the finalized requirements, and for which there is no acceptable workaround, as determined by SOV in its reasonable discretion. (Availability of workaround renders it "Sev2") |
| 2 | Sev2 | **Part of an Essential Business Process or Workgroup Affected** - Degradation of system or service performance that impacts end user service quality or significantly impairs business process control or operational effectiveness for material functionality, including functionality defined as "must have" in the finalized requirements, but for which there is an acceptable workaround. |
| 3 | Sev3 | **Non-Essential Business Process or Workgroup or Individual Affected** - Minor degradation of system or service performance that does not have any impact on end user service quality. These are typically cosmetic defects. |
| 4 | Doc | **Documentation Defect** Error or omission in document. - |

- The SOV and Supplier will coordinate to establish a series of regular, formal reviews of the project progress, issues, and strategies for risk mitigation.
- Supplier's Proposal to the SOV outlines Supplier's tasks and obligations for the HBE implementation project. In addition, Supplier has provided an organizational chart of expected staffing in Section 1.1.3.2 of this Exhibit.
- At the SOV's request to provide more granularity and transparency on project spend, Supplier will track and report the monies earned based on the services provided and deliverables furnished as set forth in Exhibit L. Specifically, these reporting requirements and supporting payment processes will be further described in the mutually executed PMP and agreed-upon payment processes. Supplier will establish the SOV Project Library using its CPMF standard Ensemble SharePoint project repository. This Project Library provides mutual access to all project artifacts, including but not limited to deliverables, and tracking tools for risk and issue management. During project startup, Supplier and the SOV will mutually determine read and update access for the Project Library as well as the process for transferring completed deliverables to the SOV Document Library.
- To the extent that Supplier has entered into other contracts with any other States, Exchanges, or the Federal Government relating to the design, development or operation of an Exchange system, Supplier as part of the project plan shall proactively identify, review, discuss and submit recommendations to the SOV regarding reuse of work from these other contracts. In determining how to reuse available design and development components and best to serve the interests of SOV, Supplier will evaluate all options from both a cost and timeline perspective in making a recommendation.

### 1.1.2. Project Work Plan Assumptions

- The SOV HBE Project Manager is responsible for reviewing available options and Project issues in a timely manner (i.e., within five (5) business days, or as mutually agreed to by the SOV HBE Project Manager and Supplier Project Manager) in order to minimize delays to the Project schedule. If resolution cannot be made within the five (5) business days (or as mutually agreed to by the SOV HBE Project Manager and Supplier's Project Manager), the SOV HBE Project Manager will raise the issue to the Deputy Commissioner and/or Commissioner within two (2) additional days.
- The Commissioner, members of the Executive Committee and Supplier Executives will form an Advisory Board to resolve issues affecting or involving other organizations and stakeholders that the Project Management Team has identified and cannot resolve in a timely manner. The Advisory Board will make decisions within 2 business days form the request for resolution of an issue.
- The below preliminary criteria must be met for Go-Live. The SOV and Supplier will develop final Go Live criteria as set forth in the PMP and conduct Preliminary Operational Readiness and Operational Readiness Reviews to assess the Exchange and supporting infrastructure and staff for readiness to Go Live. The Go-Live definition may be supplemented with criteria from the Operational Readiness Plan and/or Implementation Plan upon their completion.

Go-Live criteria:

- Tested code has been successfully released into the production environment
- SOV has reviewed and approved evidence of testing deliverables
  - **Network**: devices, connectivity, security
  - **Hardware**: Hosting environment, servers, universal power supply (UPS), storage, backup server(s) in place
  - **Interfaces**: All in scope Federal and State system interfaces and interfaces with key partners (e.g., Carriers, Premium Processing vendor, Customer Support, etc.)
  - **Software**:
    - Unit testing to ensure all system build is complete for:
      - Screens
      - Templates
      - Reports

        - System testing to ensure data pass from one function to another to support critical workflows in each of the CMS identified Exchange Components per 7/22/2013 milestone in Exhibit C
    - Security, Performance, and Load testing is complete
- All deliverables have been approved by SOV and submitted to CMS
- Post-Production Readiness plan

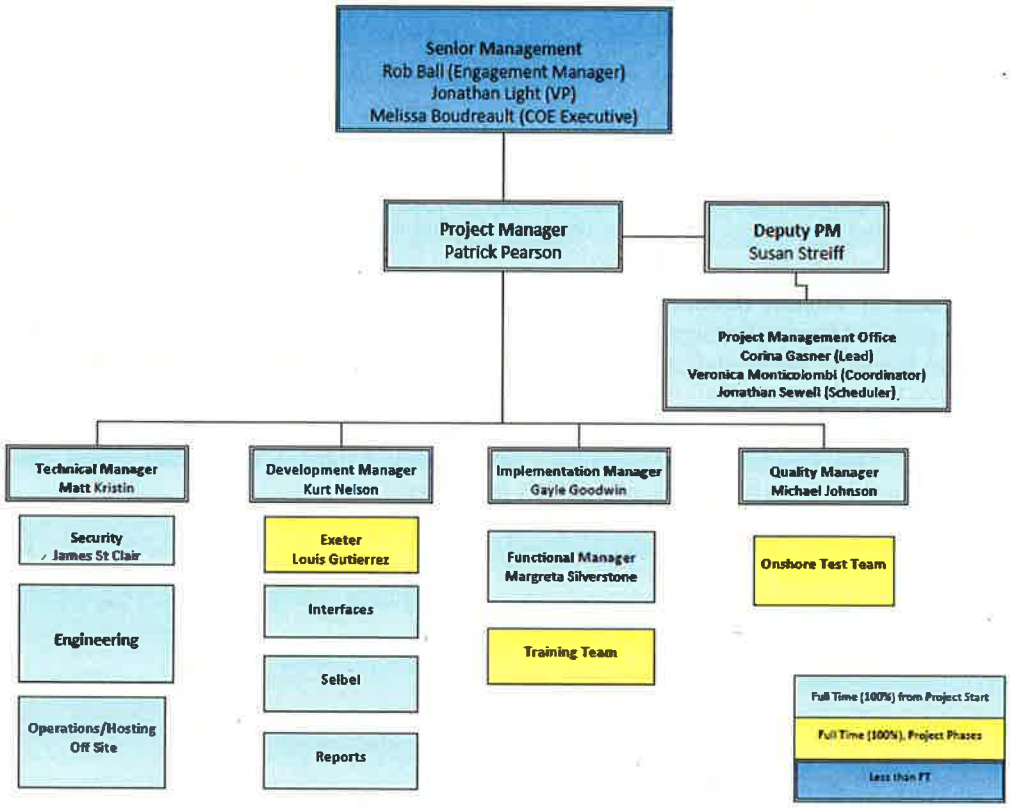
## 1.1.3. Staffing Assumptions

### 1.1.3.1. SOV

- The SOV is responsible for appointing a dedicated full-time SOV resource to establish and manage a project team to work on the Project and provide for timely completion of the SOV's Project responsibilities. Supplier has provided a list of roles expected to be provided by SOV in Section 1.3.
- The Department of Vermont Health Access, in conjunction with Department of Information and Innovation (DII) and Agency of Human Services (AHS)-IT, is responsible for facilitating the participation of other State agencies and insurance carrier staff as required to assist in the design, development and testing of State of Vermont agency interfaces and State insurance carrier interfaces.
- Supplier will incorporate SOV tasks and estimated level of effort to the project schedules through the lifecycle of the project. This view of SOV responsibility will be tracked through the regular project management approach facilitated by the SOW and Supplier project management.

### 1.1.3.2. Supplier

Supplier will have the following staffing in place for the Project:



Supplier's resource plan as of February 1, 2013 is as set forth below. The resource plan will be adjusted in alignment with the Project Work Plan, as required.

## Staffing Table

| Period | 21-Jan | 4-Feb | 18-Feb | 11-Mar | 25-Mar | 9-Apr | 23-Apr | 7-May | 21-May | 4-Jun | 18-Jun | 16-Jul | 31-Aug | 30-Sep | 30-Oct | Nov-31 | 31-Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Staff Group** | | | | | | | | | | | | | | | | | |
| Senior Management | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| PMO | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Technical | 2 | 4 | 6 | 10 | 12 | 12 | 12 | 12 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 12 | 8 |
| Development | 2 | 4 | 4 | 8 | 10 | 12 | 12 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 12 | 10 | 8 |
| Implementation | 2 | 4 | 6 | 10 | 12 | 12 | 12 | 12 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 14 | 8 |
| Quality /Testing | 2 | 4 | 4 | 6 | 8 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 8 | 8 |
| Admin | | 1 | 1 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| | | | | | | | | | | | | | | | | | |
| **Total** | **16** | **25** | **29** | **44** | **52** | **56** | **57** | **60** | **68** | **68** | **68** | **68** | **68** | **68** | **65** | **55** | **43** |

## PROJECT STAFFING REQUIREMENTS

- Supplier, to successfully fulfill the delivery of the SOV's Exchange projects within the prescribed timeframes, shall address staffing requirements as needed. Supplier will/has assign a senior member of its HR team to be its company-wide HIX Staffing Coordinator. The Staffing Coordinator is exclusively focused on staffing the Project and will coordinate the staffing between Supplier's internal organizations (internal staffing, external recruitment) as well as selected contracted external recruitment. Within our contracted external recruitment, Supplier will engage two main types of firms: (1) third party recruiting firms who are focused on recruiting national talent with HIX, health and human services, and/or specialized technical skills and (2) third party recruiting firms who are focused on recruiting qualified local talent.

### Identifying and Acquiring Staff

- Based on the position requisitions, Supplier shall identify potential candidates to fill each position through resume review and initial screening. This applies to both existing Supplier resources as well as external candidates sourced from either Supplier's external recruiting team or by third party contracted recruiting firms. Candidates are then presented to the Supplier's Project Manager to review. The Supplier Project Manager selects which candidates will move on in the interview process. Supplier's staffing organization shall conduct three interviews with at least one of the three interviews being an in-person interview. Each interviewer completes an interview assessment form and provides their recommendation. Based on the feedback, the candidate is either approached with an offer or informed that they were not selected.
- Existing staff that are completing their assignments are considered first for positions within the project, depending on the skills match. This method helps to support staff continuity throughout the life of the project. It is critical to balance the skills needed during a project phase with the valuable knowledge that staff members gain by working on the project.
- Whether recruiting internal staff or external job candidates, recruiters work closely with hiring managers throughout the recruitment process to make sure they have a complete understanding of job requirements, that candidates are sourced and referred to hiring managers that possess the requisite knowledge and skills for each position, and that positions are filled in accordance with the schedule, operational needs, as well as providing compliance with State employment-related regulations.

- Staffing processes include accountability, processes, and procedures to effectively and efficiently meet staffing requirements, State requirements, and Federal hiring practices. Supplier will ensure flexible and scalable enough to meet changing requirements and operational demands quickly and efficiently.
- Factors such as specific skill sets, experience of staff at commensurate projects, outcome successes of specific staff, cultural fit, and bench strength of the organizations supplying staff are all taken into consideration when determining how and where to acquire staff. For the Project, factors taken into consideration include:
    - Complexity and size of the project
    - Implementation of newer technologies
    - Types of business problems being addressed
    - Timeframe to implement
    - Proximity to project site and/or experience with virtual teaming
- **Change of Staff**

  Supplier will utilize the same hiring process outlined above in the event there may is a need to provide replacement or additional personnel. Replacement personnel may be required when planned staffing changes result from periods of increased project activity (those periods tracked and planned for in the Schedule across the SDLC). Additionally, when the project experiences an unplanned loss of staff, the Supplier's team is required to identify their replacement.

  Supplier is especially focused on mitigating the impact of unplanned loss of staff since the Exchange Schedule is aggressive. The Supplier's Project Manager has the authority to escalate the priority of the staffing of any position so that resources are focused on staffing the most critical positions first. At a corporate level, Supplier shall maintain a bench of project consultants (both functional and technical) that can be evaluated immediately if an unplanned loss of staff occurs. The Staffing Coordinator shall maintain a pipeline of external candidates particularly with HIX, health and human services and/or specialized technical expertise that can be tapped in the event of a sudden unplanned loss of staff on the Exchange Project. The Exchange Project team leads are directed to cross-train team staff as a stop-gap measure should an unplanned loss of staff occurs.
- **Key Staff**

  Certain roles on the project are defined as Key Staff as identified in the Organization Chart and Staffing Table located in Section 1.1.3.2 of this Exhibit. Positions that are designated as Key Staff will not remain vacant for more than 30 calendar days. Key Staff positions will not be filled with employees who are assigned to fulfill the roles and responsibilities of the position in a temporary capacity and/or maintain responsibilities for another position. Supplier shall report the replacement of Key Staff to the SOV IT Manager and HBE Project Manager and shall provide a resume for the replacement within three weeks of the Key Staff members' resignation, and will be subject to the SOV's written approval (not to be unreasonably withheld). Supplier roles and Project organization are set forth in the Organization Chart and Staffing Table above.

Supplier's Project Manager will coordinate its project activities with the SOV HBE Project Manager in regards to project-related items such as: financial reporting, contract amendments, invoicing, status reports, etc.

### 1.1.4. Facilities and Access

- The SOV is responsible for providing space and furnishings for Supplier to co-locate their project teams in a joint facility. Supplier is responsible for providing computer equipment needed for its staff.
- The SOV will provide badge access for Supplier personnel to identified locations for the duration of the Project as long as Supplier staff meet the SOV security requirements necessary to provide a badge.
- The SOV will provide wireless, internet connectivity to Supplier staff at the co-location site.

### 1.1.5. Deliverables & Standards Assumptions

- The SOV is responsible for reviewing Project document deliverables in the timeframes specified in the PMP. The SOV and Supplier Project Managers may mutually agree to shorten or extend the review time should it be required. Any such change to the duration will be documented in the mutually agreed Project Schedule and/or otherwise be documented in writing and agreed to by the SOV Project Manager and the Supplier's Project Manager.
- The review and approval of Change Orders will be performed using mutually agreed processes as defined in the MSA and Exhibit H.
- The resolution and documentation of issues will be performed using mutually agreed processes as defined in the PMP.
- Supplier will provide a deliverable transmittal / notification letter with each deliverable, including services-only deliverables using templates defined in the PMP.
- A list of the required deliverables to be completed by Supplier through are provided in this Exhibit E the Pricing Exhibit L.
- The Pricing Exhibit L and timeline for delivering Supplier services assume the timely and appropriate participation of the State of Vermont agencies in the updated Project Work Plan and as stated in the PMP. In the event timely participation is not secured, the Supplier Project Manager will work with the SOV Project Manager to escalate to the Deputy Commissioner or Commissioner for deliberation and resolution. A Change Order, utilizing the process identified in Exhibit H, may be executed upon mutual agreement if additional Supplier resources are warranted.

### 1.1.6. Hardware and Software Assumptions

- If it is mutually agreed that a third party software product is not needed to meet Exchange requirements, the software can be removed from the Exchange solution. This does not affect Supplier's obligation to meet all requirements of the Project.

## 1.2. Assumptions – Design, Development, Implementation (DDI)

### 1.2.1. Design and Requirements Validation

- Supplier will lead requirements verification sessions with the SOV, and provide updated requirements documents for review and sign-off by SOV Business Leads.
- Supplier will lead the Design sessions and use the One Gate System to facilitate a gap analysis between the existing system and what needs to be configured or developed for the SOV.
- The SOV will facilitate dedicated time from other agency functional and technical resources knowledgeable in their systems requirements to facilitate interface design.
- The following process will be followed in support of the Requirements Design Integration
    - Demonstrate and discuss the requirement
    - After the requirement is demonstrated, Supplier will ask SOV for agreement that the requirement has been met or validated. If the requirement is demonstrated in a way for which Supplier can validate that Supplier understands the requirement, but it is not met, the Supplier facilitator should indicate the requirement is being validated not met and we will be able to demonstrate at a later date, if needed.
    - There can be 4 basic results:
        - SOV agrees with no comment or action necessary (agreement is received that the requirement has been met, or validated in the case where Supplier is demonstrating the understanding of the functionality).
        - SOV agrees that Supplier has met the requirement but there is still an action item.
        - SOV agrees Supplier has met the requirement but with comments

- SOV doesn't agree that Supplier has met the functionality. This should always have an action item for Supplier management, and possibly a comment. There should be a full description of why SOV doesn't believe the requirement has been met.

- All action items and comments will be assigned a lead person and participants identified for resolution. The lead is responsible for getting the information or following up on the comment. A due date will also be assigned. The due date should be prior to the next scheduled meeting, if possible.

## 1.2.2. Development and Implementation

### 1.2.2.1. Solution Configuration Development and Testing

- Supplier will be responsible for Unit, Integration, System, and load testing with support from the SOV in reviewing and approving test cases and test results.
- Supplier will organize and support User Acceptance Testing (UAT). The SOV will provide resources to execute UAT scripts. Supplier and SOV will document a plan for development of the UAT scripts in the testing plan.
- The Establishment Review Process has replaced the Exchange Lifecycle as the current CMS guidance for Exchange deliverable review.
- Supplier will train SOV staff on the use and organization of Supplier Ensemble SharePoint project repository. The Supplier Ensemble SharePoint repository should be used to store only project management and delivery documentations; State-specific confidential data will not be stored in the Supplier Ensemble SharePoint repository.
- Supplier will work with the SOV to provide preliminary design review artifacts to support a "Design Consult" with CMS targeted for Q1 2013. Supplier will support the SOV-CMS design reviews by providing the artifacts defined as necessary by CMS for Federal Gate reviews.
- Exchange will support browsers consistent with CMS Guidance for web-based non-employee facing user interfaces. Exchange will support commonly used browsers (Internet Explorer 8 and above), Firefox (current and subsequent versions plus the two prior versions), Chrome (current and subsequent versions plus the two prior versions) and Safari (5.1 and subsequent versions).
- While a broad range of devices such as smart phones, tablets, and iPads that have modern web browsers that support HTML5 will be able to access the consumer portal, the full shopping, enrollment, and self-service capabilities of the Exchange require ample screen size (e.g., tablet and above) for appropriate usability.
- Any modifications to the existing eligibility legacy system (ACCESS) that may be required as a result of the implementation of MAGI eligibility will be accomplished outside the scope of this effort.

### 1.2.2.2. Interfaces

- The State and Federal Systems/Applications that integrate with the Exchange will be available during System Integration / UAT with data to test end to end scenarios.
- The SOV is responsible for facilitating Supplier's access to and ensuring the availability of access to SOV systems and interfaces.

- Supplier and the SOV have developed a list of required interfaces within the Project Work Plan, through the 'interface deliverables.' The SOV will provide such interfaces through inter-agency agreement with the State agencies and secure production files for the final testing of the system interfaces.

- Supplier will provide an interface to the Federal Data Services Hub, including:
    - Federal Exchange Eligibility Service Interface
    - CMS System Interface
    - Federal Hub Interface
- Other in-scope interfaces include:
    - Carrier System Interface
    - Other State Interfaces
    - Eligibility Systems Interface

### 1.2.2.3. Reporting

- The SOV will provide trained and qualified staff for reviewing and approving the reports requirements and designs developed by Supplier for the Exchange.
- Supplier will provide the Data Warehouse Data Model, ETL Layer, and SOV reports creation capability. Supplier will provide the required CMS reports, all reports defined in the SOW, and an additional 2,000 hours a year of support to assist the SOV in formatting and producing reports. For avoidance of doubt, there shall be no additional or incremental charge to SOV for the aforementioned support.
- Supplier's proposed price includes an extract to CMS for Risk Management Corridor Adjustment processes, but the data collection requirements and analysis remain undefined and are not included in CGI's proposed price.

### 1.2.2.4. Policies, Procedures, and Internal Controls

- The SOV is responsible for developing the internal control policies and executing inter-agency agreements for the Exchange.

### 1.2.2.5. Training

- Supplier will provide a dedicated Training Manager for the Project. The SOV will designate dedicated Project leads to support Change Management and Outreach activities. The SOV Change Management and Outreach Project leads and the Supplier Training Manager will coordinate activities to support the timely completion of tasks identified in the Project Work Plan.
- Supplier will provide and deliver Trainer curriculum. Training activities will occur within the State of Vermont. The SOV will provide adequate and appropriately skilled staff to serve in the role as Trainers.
- The SOV will assist in identification of roles, positions, audience groups and the training requirements for each role and position. It is assumed that learners will participate in the training events identified in the Project Work Plan.
- Supplier shall provide and maintain the rooms and the necessary equipment and resources to accommodate, support and deliver training in a variety of methods including instructor led and computer based training, online tutorials, and podcasts.

## 1.2.3. Deliverable List

### Project Management Deliverables

| Deliverable | Description |
|---|---|
| **(D-04) Project Management Plan (PMP)** | Project overview, project scope definition, overview of the project management plan and related processes. Includes a project organization chart. The PMP includes the following standard sections. |
| **Scope Management Plan** | The Scope Management Plan addresses the definition, monitoring, controlling, verification and communication of project scope to stakeholders and team members. Contractual documents, the project deliverables list, and the work breakdown structure provide the definition of scope for the projects, and this document describes the roles, processes and tools used to manage this scope, particularly as it relates to how and when scope changes may be made in the Change Management topic.<br><br>Change Management will describe the process, procedures, and tools that will be employed for the project to determine whether or not a change should be made to a baseline configuration item. The Change Management process provides the capability to identify, accept, evaluate, determine, and communicate the disposition of issues that result in changes to project scope or configured items. |
| **Configuration Management Plan** | The processes and tools by which software and non-software work products are developed, stored, reviewed, approved, versioned, baselined, tracked, and maintained. This includes deliverables management and requirements traceability.<br><br>This will cover both the management of deliverables and requirements through the project lifecycle, and address the tools and processes for managing them. |
| **Schedule Management Plan** | The process of managing, maintaining and controlling the Project Work Plan and Schedule, including a WBS based upon deliverables and milestones of the Project |
| **Quality Management Plan** | The overall quality methodology and processes for the project, including quality assurance, quality management, and quality control. The Quality Management Plan addresses the methodology for quality, including adherence to project standards, templates, processes and procedures.<br><br>This section will specifically address the processes by which project deliverables will be clearly defined, including acceptance criteria, through Deliverable Expectation Documents (DED), followed by other process steps in place to maintain quality as deliverables are developed, submitted, reviewed and approved. |
| **Human Resources Management Plan** | The processes that are used to organize and manage the project team. It includes the approach for addressing staffing requirements, project roles, and responsibilities and how changes in staffing will be handled. |

| Deliverable | Description |
|---|---|
| **Communication Management Plan** | The processes required to ensure timely and appropriate collection and distribution of project information. It also includes the methodology for determining the information needs of project stakeholders, how necessary information will be made available to stakeholders in a timely manner, and how performance reporting will be distributed to ensure successful project communication to all levels of stakeholders. This section will clearly address Project status reporting and will describe the intervals for formalized written and verbal reporting on project progress against the project schedule, keeping project stakeholders informed on critical aspects of project health such as schedule, issues, scope, resources, allowing management to take action to address issues and risks. Supplier is integrating the HBE Project status reporting with the processes being developed and implemented by the SOV, both in terms written status and status meetings and presentations. |
| **Risk Management Plan** | The processes concerned with conducting risk management planning, identification, analysis, responses and monitoring and control on a project including tracking tools. The objective of Risk Management is to decrease the impact and probability of adverse events on the project. |
| **Issue Management Plan** | Identification, inventory, analysis, responses, monitoring, and control of issues on the project including tracking tools. The objective of Issue Management is to identify and address issues that have occurred, or will occur. |
| **Contract Management Plan** | Provides visibility and transparency and addresses how Supplier will identify, track, and report on contract terms and conditions to demonstrate how and when they are fulfilled and invoices will be issued. The approach to contract management also includes management and administration of Supplier subcontracts.<br><br>This section will address performance management, and will describe the methods for performance goal establishment, data collection, analysis, control, and reporting.<br><br>This will also include tracking and report of Supplier monies earned based on the Services provided and Deliverables furnished as well as supporting payment processes. This will also include processes for establishing and tracking the formal deliverables list. |
| **(D-01) Baseline Schedule (WBS)** | Supplier has provided and will maintain a WBS in MS Project that provides:<br>o A consolidated view of the activities, activity descriptions, and activity durations<br>o A list of deliverables tied to project milestones<br>o A way to track the project schedule against the planned schedule<br>o Deliverable approval periods<br>The WBS will be maintained throughout the life of the project and will be updated as necessary (weekly at a minimum) to reflect the accurate status of the project. For convenience, the WBS is also referred to as the "Work Plan," "Project Work Plan," "Schedule" and "Project Schedule" herein. |

# Elaboration Deliverables

| Deliverable | Description |
|---|---|
| **Interface Design Documents** | Supplier will develop interface requirements documents to support the 4 categories of interfaces listed. The interface requirements documents will address for each of the interfaces the major function being supported, direction (one or two way), the major integration points, a specific list of the data elements, and the frequency (batch or interactive). |
| **(D-05) State Interfaces Design Document** | Specific requirements for the state interfaces design. |
| **(D-06) Federal Interface Design Document** | Specific requirements for the federal interfaces design. |
| **(D-07) Carrier System Interface Design Document** | Specific requirements for the carrier interfaces design. |
| (D-08) Exchange Accounting System Interface Design Document | Specific requirements for the accounting system interfaces design. |
| **Deliverable: (D-17) Requirements Specification Document (RSD)** | The RSD provides a complete description of the behavior of the system to be implemented as well as describe interactions the users will have with the software.<br><br>Supplier will again leverage the documentation provided by the Federal CALT and our own artifacts from HIX projects already underway. |
| (D-16) Requirement Traceability Matrix (RTM) | The Requirements Traceability Matrix, which for avoidance of doubt includes the Functional Requirement Traceability Matrix and the Non-Functional Requirement Traceability Matrix, is the basis for making sure we meet all the program requirements by Phase. It tracks all requirements through the DDI phase to confirm the final solution meets expectations.<br><br>The RTM provides links between the business requirements, technical design, use cases, and test cases.<br><br>The RTM validates full coverage of the requirements in the solution and also is the base for analyzing the impact of changing requirements, once in production, to the various system components.<br><br>The RTM will be updated throughout all phases of program. |

| Deliverable | Description |
|---|---|
| (D-18) Test Plan | Plan for testing activities, periods, test cases, mapping requirements to the specific tests, tracking and resolving issues, verification methods, test data needs, and version control. Maps requirements to test cases. Identifies requirements for the testing environment where test cases will be executed. The test plan will include a plan for an end-to-end integration test from end-consumer to all systems and back, testing all federal and state agencies, as appropriate, to ensure accurate Exchange functionality and data |
| **(D-19) Business Rules** | Business rules establish how the system will act based on the information presented. Business rules codify State, Federal, and Connector policy into system actions.<br><br>Business rules will be codified in the Oracle Policy Automation tool. Changes to business rules will follow a similar methodology to other system changes (e.g., analysis and testing) but will be managed by authorized end users. |
| (D-21) Database Design Document | The Database Design Document will include the system context and the basic database design approach, including dependencies and interfaces with other databases and/or systems. It describes the logical data model, including a definition of common understanding of business data elements and inter-relations to form the basis for physical database design, and physical data model including the database entities/tables/views. |
| **(D-20) System Design Document** | Transformation of the requirements, user-oriented functional design, and data design into more technical specifications from which the system will be built. |
| **(D-22) Data Management Plan** | Strategy for managing data during and after project execution. Identifies data archiving/data retention plans The goal of a data management plan is to consider the many aspects of data management, metadata generation, data preservation, and analysis to help ensure that data are well-managed in the present, and prepared for preservation in the future and the database schemas support accurate data usage. |
| **(D-23) Interface Control Document (ICD)** | Describes external inputs to and all outputs from a system for some potential or actual user of the system. There will be an ICD for each interface that defines the data elements in the interface, the method of transfer, frequency, and contingency plans in the even the interface fails.<br><br>The Supplier will provide its expertise with the ICD process underway for the Federal HUB and will use our HIX Center of Excellence and our current projects to inform the SOV HBE project. |

## Construction Deliverables

| | Description |
|---|---|

| | Description |
|---|---|
| **(D-26) System Security Plan** | Required of federally owned systems. This plan describes security controls within the system that will protect the confidentiality, integrity, and availability of the system and its information. |
| **Deliverable: (D-27) Information Security Risk Assessment** | Required for federally owned systems. This assessment includes identification of risks and possible mitigation associated with information security components and supporting infrastructure. |
| **Deliverable: (D-28) Implementation Plan** | Descriptions and procedures of how the Exchange solution will be installed, deployed, and transitioned into an operational system<br><br>The Implementation and Deployment Plans must include the following components:<br><br>A detailed explanation of the Supplier's implementation methodology<br><br>An up-to-date detailed implementation schedule |
| **Deliverable: (D-29) Contingency/Recovery Plan** | Required of federally owned systems. Includes management policies and procedures to maintain or restore business and technical operations in the event of emergency, system failure, or disaster |
| **Deliverable: (D-30) Data Use Agreement/Data Exchange Agreement/Interconnection Security Agreement** | Agreements between parties for the use of personal identifiable data, and to ensure secure data exchange. This includes a Safeguards Procedures Report (SPR), which includes information that Internal Revenue Service (IRS) Office of Safeguards expects from an agency regarding their procedures for safeguarding Federal Tax Information (FTI), in any instance where that agency intends to receive, store, process, or transmit FTI |

**Test Results Deliverables**

Each systemtest scenario will be executed and the results recorded and compared with expectations. Any mismatch between expected and actual results will be recorded as a possible defect. Test results will include test performance and outcomes identifying any issues in any process from beginning to end as needed to ensure accurate Exchange functionality.

| Deliverable | Description |
|---|---|
| **(D-09) Eligibility System Interface Test Results** | Test results for the Eligibility System Interface |
| **Deliverable: (D-10) Other State Interfaces Test Results** | Test results for the Other State Interfaces |
| **Deliverable: (D-11) Federal Exchange Eligibility Service Interface Test Results** | Test results for the Federal Exchange Eligibility Interface |
| **Deliverable: (D-12) CMS System Interface Test Results** | Test results for the CMS System Interface |
| **Deliverable: (D-13) Federal Hub Interface Test Results** | Test results for the Federal Hub Interface |
| **Deliverable: (D-14) Carrier System Interface Test Results** | Test results for the Carrier System Interface |
| **Deliverable: (D-15) Carrier System Interface Test Results** | Test results for the Carrier System Interface |

| | |
|---|---|
| **Deliverable: (D-31) Test Reports** | This deliverable will include the test results for the following 4 test cycles<br><br>• Integration Test Reports<br>• Performance Test Reports<br>• System Test Reports<br>• UAT Test Reports<br><br>Though the deliverable will include all 4 test cycles, the cycle specific reports will be developed and reviewed incrementally throughout the testing cycle. |

**Transition and Support Deliverables**

| | Description |
|---|---|
| **Deliverable: (D-32) Go-Live Document** | Documentation in support of the Exchange Go-Live Event. |
| **Deliverable: (D-33) Operation & Maintenance Manual (O&M)** | Description of the business product operating in the production environment, and information necessary to effectively handle routine production processing, ongoing maintenance, performance monitoring, and identification of problems, issues, and/or change requirements.<br><br>The Operations & Maintenance Manual details instructions and directions for the Maintenance and Operations (M&O) work that the Supplier's Infrastructure and Application staff need to perform in support of Exchange operations. As guidance the manual must speak to the following areas:<br>• System and Application Accounting (List)<br>• System Backup and Restore Procedures and Schedule<br>• VM to VM cloning Procedures<br>• Patch Procedures and Schedule<br>o Infrastructure<br>o Application<br>• Upgrade Procedures and Schedule<br>o Infrastructure<br>o Application<br>• New Release Procedures and Schedule<br>o Infrastructure<br>o Application<br>• Security<br>o Components<br>o Security Procedures and Audit Schedule<br>o Log File Administration<br>o Breach Incident Reporting<br>• Monitoring and Incident Reporting<br>o Data Storage Growth<br>o Performance |

| | Description |
|---|---|
| | • Authentication and Authorization Procedures<br>• Failover and High Availability<br>• Documentation<br>o Systems<br>o Applications<br>o Scheduled Routines and Processes<br>o Procedures Checklists<br>o Topology<br>o Roles<br>• Refresh of the Training Environments<br>• Document Management:<br>o Thunderhead<br>o OPA Rules |
| **(D-34) Training Plan** | Description of training effort to use and support the system, including initial and subsequent remedial training for business users and system support personnel. |
| **(D-24) Training Materials** | Documentation on the overall solution to enable end users to effectively utilize the system.<br>Documentation associated with the deployment and use of the Business Product, including instructor and student guides, audio-visual aids, and computer-based or other media.<br>The Supplier Team will leverage our other HIX engagements to bring together the Training Materials, Manuals and lessons learned. |
| **(D-25) User Manuals** | Documentation associated with the deployment and use of the Business Product, including instructor and student guides, audio-visual aids, and computer-based or other media. |

## 1.3. SOV Quality Assurance (QA) / Independent Verification and Validation (IV&V) Vendor Support

Quality Assurance (QA) is a review process performed by an organization that is technically, managerially, and financially independent of the vendor organization. SOV understands the importance and strongly endorses the use of QA to ensure a successful System. SOV will contract for QA services to support the success of the Project. QA and project oversight activities related to the project will be performed by the Quality Assurance provider that has been selected by SOV.

QA Verification uses iterative processes throughout the SDLC to determine whether the plans, methods and products delivered fulfill the requirements placed on them by previous iterations, phases and steps and are internally complete, consistent, and sufficiently correct to adequately support the next iteration, phase and step.

QA Validation is the process of examining and exercising the complete application (software, hardware, procedures, and documentation) to determine whether all stakeholders' requirements have been met. QA

Validation begins at the beginning of the SDLC phase and deliverable to ensure that the plan and approach will move in a direction to eventually satisfy stakeholder needs. QA Validation also occurs at the end of the SDLC phase and deliverable to ensure the deliverable truly meets the latest requirements of the stakeholders (regardless of how many times these requirements may have changed during the project)

Supplier will collaborate with the current SOV QA/IV&V vendor in partnership with the State and the SOV and Supplier Project Directors and perform the following functions:

- Review project planning deliverables to ensure they are sufficient and meet applicable project standards
- Review ongoing project processes, methods and activities
- Provide technical review and verification of key project milestones and deliverables
- Provide independent review of project deliverables against requirements
- Anticipate and identify project risks and monitor the project risk management process
- Offer suggestions for problem and issue resolution
- Develop Independent Project Oversight Reports and delivers them to the Executive Committee and Project Management team
- Provide monthly review and recommendations to the Executive Committee regarding project status and risk anticipation, prevention and mitigation
- Provide periodic review and recommendations to the Project Director regarding project status and risk anticipation, prevention and mitigation

## 1.4. State of Vermont Health Services Enterprise Program Office of IT Projects Structure

**State of Vermont Health Services Enterprise Program Office of IT Projects**

**AHS and Department of Information and Innovation Project Roles and Responsibilities**

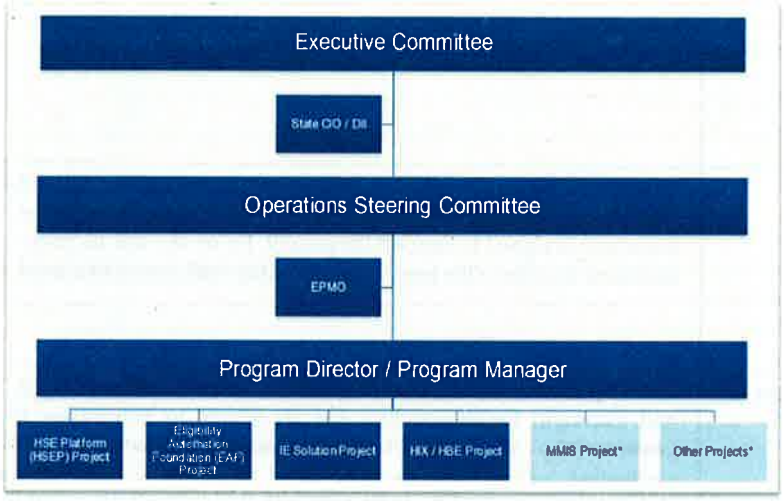
| Role | Functions |
|---|---|
| **Project Sponsor** | The Project Sponsor assumes project ownership and performs the following functions:<br><br>Assumes project ownership, and is the highest possible level of project review and provides policy leadership and oversight as needed. Reviews and resolves policy, fiscal, and resource allocation issues that cannot be resolved at lower levels.<br><br>Ultimately accountable for securing spending authority and resources. Acts as a vocal and visible champion, legitimizing goals and objectives. |
| **Executive Committee** | The Executive Committee will be comprised of senior management personnel and representation from the Project facilitated by an appointed chair person who will be part of the committee, and the committee will convene regularly to provide direction or support required to the project and to support the Project Director. |
| **Project Director** | The Project Director is responsible for the overall success of the project through planning, directing, and overseeing the activities of the Project resources. |
| **Project Team** | The Project Team will be comprised of the various SMEs from both the business and technical spheres and end users from the State, and Local Agencies, as well has QA team members. This team will assist in various day- to-day activities and/or key milestones of the project. |
| **Project Manager** | The Project Manager will be responsible for gathering and distributing information on project status, risks, issues and quality assurance reporting. This role will be filled by a person with in- depth knowledge of State and Industry PM methodologies and will report to the Project Director. The Project Manager will have the responsibility of formally accepting vendor project deliverables, unless this responsibility is delegated to another party.<br><br>The Project Manager will be responsible from a State perspective for ensuring scope, schedule, budget, and minimal required documentation deliverables are completed. |

| Role | Functions |
|---|---|
| **Business Leads** | The HBE Business Leads will work with their respective SMEs of the business units to understand their System and process requirements and articulate the requirements to the Supplier, Integration Managers, QA Lead and the Technical Leads. The person in this role ensures that the proposed solution aligns with the business requirements of the organization. He or she will have the ability to manage the expectations of the business units with a clear understanding of the Project Sponsor's project objectives. This role will be filled by an FTE with in-depth knowledge about the business side of Eligibility and will report to the respective Integration Manager. |
| **Technical Leads** | The HBE Technical Leads are responsible for the successful implementation and execution of the proposed solution. Responsibility includes managing the technical resources assigned to support the project. He or she will be responsible for all technical aspects of the project and working with enterprise architects. |
| **State CIO (Department of Information and Innovation)** | The Department of Information and Innovation was created in2003 to provide direction and oversight for all activities directly related to information technology within state government, including telecommunications services, information technology equipment, software, accessibility, and networks in state government. The CIO and Commissioner of DII have broad authority to meet the goals of the department as established by statute and policy. The CIO has approval authority for all IT activities in excess of $100k. |
| **Enterprise Project Management Office** | The EPMO provides statutory oversight of IT projects within the State, develops and maintains project management artifacts, implements standards for IT project selection, ensures benefit realization of IT projects and manages the State IT project portfolio. It will provide oversight and guidance for the State Project Manager, project management team and Supplier Project Managers. |
| **QA Leads** | Quality Assurance (QA) Lead is responsible for ensuring that all System components are error-free and meet Project's expected level of Quality. Responsibility includes defining and managing the QA process throughout the SDLC (System, Integration, UAT, Formal Acceptance Testing (FAT) and Pilot Testing) and managing various QA resources at each phase of Testing as defined in the Test Plan (D-18). |
| **Business SMEs** | Business SMEs from all involved business units will be asked to participate in the requirements definition process, data cleansing, QA and testing and training efforts. Business SMEs will be utilized on an as-needed basis and at key milestones of the project. |
| **Technical SMEs** | Technical SMEs from all involved IT units will be asked to participate in the non-functional requirements, design, and data conversion, QA and testing and training efforts. Technical SMEs will be utilized on an as needed basis and at key milestones of the project. |

**Health Services Enterprise (HSE) Program Management Office Structure and Responsibilities**

The following Figure describes the current structure of the HSE Program Management Office within AHS. Due to the interlocking functionality of the projects, each project team will be highly informed of the activities happening within the other projects within the EPMO. The Supplier will be expected to support AHS Program-level and inter-project communications between project teams to ensure proper transfer of knowledge between them.

**HSE Program Management Office**



**State of Vermont Program Management Office Roles and Responsibilities**

The following table provides the anticipated roles in the Project organization:

| Entity | Core Focus |
|---|---|
| **Executive Committee** | • Set Program Mission and Goals<br>• Establish Priorities and Non-Negotiable (Mandates)<br>• Review, Comment and Approve Operations Steering Committee |
| **Operations Steering Committee** | • Ensure clarity of business imperatives and alignment of project plans with Executive Committee mandates and statutory authority<br>• Provide oversight of core projects' resource and vendor allocation plans<br>• Review and respond to project risk and risk mitigation strategies that may be escalated to the Executive Committee |
| **Program Director** | • Responsible for comprehensive project/program planning and coordination of project delivery with projects' Project Managers<br>• Establish Project Charters, Integrated Program Plans and Roadmap<br>• Ensure coordination effectiveness of the core projects with associated business process changes<br>• Accountable and responsible for fulfilling mandates and achieving key HSE PMO milestones and objectives<br>• Identify and Mitigates HSE PMO Risks<br>• Support resource management by assigning and aligning project managers and team members to the core projects<br>• Provide and fosters open and active communications with all stakeholders |
| **Program Manager** | • Accountable and responsible for individual core project planning, implementation and risk identification/mitigation<br>• Support development of Project Charters, Integrated Program Plans<br>• and Roadmap in coordination with Program Director<br>• Responsible for cross project coordination with other core projects and associated business process changes<br>• Accountable for accomplishing the stated project objectives and management of vendors assigned to the individual projects |
| **Project Manager** | • Accountable and responsible for individual core project planning, implementation and risk identification/mitigation<br>• Responsible for cross project coordination with other core projects and with related Business Process Reengineering Projects<br>• Accountable for accomplishing the stated project objectives and management of vendors assigned to the individual projects |
| **Business Lead** | • Ensure active involvement of Business SMEs in core project<br>• Lead coordination efforts between core project and related BPR efforts |
| **Technical Lead** | • Ensure active involvement of Technical SMEs in core project<br>• Ensure technical standards and State policy is followed through projects<br>• Coordinate technical efforts with Program and State technical leadership |
| **Subject Matter Experts (SMEs)** | • Responsible for input within their areas of expertise<br>• Contribute to deliverables |

## 1.5. Supplemental Activities

As an output of the Revised Scope Date item resolution, CGI will undertake the following supplemental activities:

*Customer Service*

- Provide SME resource(s) to liaison between CGI and Customer Support workshops; identify potential improvement opportunities
- Assist in analyzing the current set of Resolver roles and responsibilities, ecosystem, and escalation points, and recommend customer-centric and efficient best practices
- The CGI SME will also provide guidance for Operating Level Agreements by reviewing and commenting on key focus areas, including services provided, escalation procedures, change procedures and process improvement

*Financial Management*

- Utilizing existing templates, design, build and implement reports based on financial data received from the Premium Processing solution
- All reports will be available for automatic upload into VISION on a daily basis
- Three reports have been identified for development, AR, AP and GL, with an additional two more to be defined

*Privacy & Security*

The following items will be included as part of CGI's project delivery:

- Draft PIA
- Draft a Business Partner Agreement
- Draft standards, policies and procedures to comply with 45 CFR §155.260
- Design training for staff (ESD etc.) re ACA requirements. (mandatory HIPAA training already in place)
- Design training for contractors – for example navigators and/or assistors, with the final list to be developed

*User Experience*

- Should SOV chose, contract with Jellyvision for the implementation of their avatar solution, supporting the non-transaction member experience
- At the direction of SOV, engage additional resources to support the activities in the areas of user experience, member quality assessment, and/or decision support tools

The following adjustments were made to the cost proposal based on the output of the 30 Day activities

- A collective goal was set to identify and act upon potential re-use opportunities, reflected as a credit to SOV
- Plan Management implementation costs were reduced
- Costs for an interface with the Federal Data Hub were added
- Requirements in support of MAGI Medicaid were added to the RTM

# Exhibit F

Security Policies

1. CMS Catalog of Minimum Security Controls for States Supplement, as finalized and amended by CMS from time to time.
2. State of Vermont Security Policies and the Agency of Human Services Security Policies. These policies are available upon request.
3. Recommended Security Controls for Federal Information Systems, NIST Special Publication 800-53, to the extent not in conflict with 1 and 2 above.
4. IRS Safeguards Program – Publication 1075, FIPS 140-2 and IRS Security Bulletin 1075.
5. HIPAA Security and Privacy Rules as amended by HITECH and as amended from time to time.
6. Any other information technology security policies implemented and/or adopted by SOV, as amended from time to time. These policies are available upon request.
7. Prior to placement of Supplier Personnel on the project, SOV will provide the appropriate level of HIPAA compliance training to Supplier Personnel as deemed necessary by SOV.
8. Security measures requested by DVHA necessary to provide space to the Supplier or access to any SOV Facilities as provided for in Exhibit E or in the MSA.
9. Payment Card Industry – Data Security Standard (PCI-DSS) version 2.0 policies and any subsequent update or amendment thereto.

**Pricing Exhibit Table of Contents**

Contents of the Pricing Exhibit:

**Summary Cost**

**L-1 Statement of Work 1: Design, Development and Implementation (DDI) of VT HBE**

L-1.1 Deliverables and Invoice Amounts
L-1.2 Hourly Rate Table of SOW #1

**L-4 Statement of Work 4: Hosting and Maintenance & Operations (M&O)**

L-4.1 Monthly DDI Services
L-4.2 License Costs
L-4.3 Annual M&O Services
L-4.4 Hourly Rate Table SOW #4
L-4.5 Environment Cost
L-4.6 Summary Cost of SOW #4

**Vermont HBE**

Notwithstanding anything herein to the contrary the parties agree that SOV's obligation to make any payment set forth herein, including payment of any monthly fee, license fee, deliverable fee, or milestone-related fee, shall be conditioned upon Supplier's fulfillment of its obligations related to such payment and Supplier's delivery of any deliverable related to such payment, as applicable, in a form and manner satisfactory to SOV.

The table below is a high-level summary of maximum amounts payable in SOW #1 and SOW #4. The figures reflect the sum of the L-1 Tables and L-4 Tables. The Supplier understands that there is no commitment from the SOV to extend the contract term beyond the base years unless it is reduced to writing in an amendment signed by both parties.

**Summary Cost SOW#1 and SOW#4**

| Statement of Work | Total Cost |
|---|---|
| **SOW #1: SI Services** | **$ 32,136,258.00** |
| **SOW #4: Hosting** | **$ 30,073,712.13** |
| -Base Years | $ 18,888,671.13 |
| -Optional Years | $ 11,185,041.00 |
| | |
| **Base Years Grand Total** | **$ 51,024,929.13** |
| **Base + Optional Years Grand Total** | **$ 62,209,970.13** |

**The L-1 tabs that follow provide the payment provisions for SOW#1**

# L-1 PAGE DIVIDER

# TABS THAT FOLLOW PROVIDE PAYMENT PROVISIONS FOR SOW #1

**Vermont HBE**

**L-1.1 Deliverables and Invoice Amounts**

This table L-1.1 shows the completion dates, expected invoice dates, and invoice amount by deliverable for each Deliverable. The Supplier shall invoice the SOV monthly for the deliverables completed in the previous month. The invoices will be due and payable 30 days following the date on the invoice. All payments are subject to SOV acceptance of completed deliverbales.

For avoidance of doubt, as set forth on page 2, all payments are subject to SOV's acceptance for any monthly fee, license fee, deliverable fee, or milestone-related fee.

| Deliverable Number | UID | Deliverable | Completion Date | Expected Invoice Date | Invoice Amount by Deliverable |
|---|---|---|---|---|---|
| 1 | 3881 | Project Management Plan | 2/8/2013 | 3/1/2013 | $1,285,450 |
| 2 | 3871 | Baseline Schedule (WBS) | 1/16/13 | 3/1/2013 | $1,285,450 |
| 3 | 4751 | State Interfaces Design Document | 4/12/13 | 5/1/2013 | $321,363 |
| 4 | 4762 | Federal Interface Design Document | 4/12/13 | 5/1/2013 | $964,088 |
| 5 | 4781 | Carrier System Interface Design Document | 4/12/13 | 5/1/2013 | $642,725 |
| 6 | 4791 | Exchange Accounting System Interface Design Document | 4/12/13 | 5/1/2013 | $321,363 |
| 7 | 4885 | Requirement Traceability Matrix (RTM) | 4/12/13 | 5/1/2013 | $1,285,450 |
| 8 | 4877 | Requirements Specification Document (RSD) | 4/25/13 | 5/1/2013 | $1,285,450 |
| 9 | 4911 | Interface Control Document | 5/1/13 | 6/1/2013 | $642,725 |
| 10 | 4579 | Training Plan | 5/22/13 | 6/1/2013 | $964,088 |
| 11 | 4903 | Database Design Document | 5/8/13 | 6/1/2013 | $642,725 |
| 12 | 4167 | Data Management Plan | 5/8/13 | 6/1/2013 | $642,725 |
| 13 | 4095 | Test Plan | 5/9/13 | 6/1/2013 | $964,088 |
| 14 | 4150 | Business Rules | 5/9/13 | 6/1/2013 | $642,725 |
| 15 | 4895 | System Design Document | 5/9/13 | 6/1/2013 | $1,285,450 |
| 16 | 4803 | Eligibility System Interface Test Results | 6/25/13 | 7/1/2013 | $642,725 |
| 17 | 5339 | Other State Interfaces Test Results | 6/25/13 | 7/1/2013 | $642,725 |
| 18 | 5178 | Federal Exchange Eligibility Service Interface Test Results | 6/25/13 | 7/1/2013 | $321,363 |
| 19 | 5210 | CMS System Interface Test Results | 6/25/13 | 7/1/2013 | $321,363 |
| 20 | 5242 | Federal Hub Interface Test Results | 6/25/13 | 7/1/2013 | $964,088 |
| 21 | 5274 | Carrier System Interface Test Results | 6/25/13 | 7/1/2013 | $964,088 |
| 22 | 5306 | Exchange Accounting System Interface Test Results | 6/25/13 | 7/1/2013 | $321,363 |
| 23 | 5037 | Implementation Plan | 7/22/13 | 8/1/2013 | $1,285,450 |
| 24 | 5046 | Contingency / Recovery Plan | 7/22/13 | 8/1/2013 | $1,285,450 |
| 25 | 5055 | Data Use Agreement/Data Exchange Agreement/Interconnection Security Agreement | 7/22/13 | 8/1/2013 | $1,285,450 |
| 26 | 4569 | Operation & Maintenance Manual (O&M) | 9/10/2013 | 10/1/2013 | $1,285,450 |
| 27 | 5063 | Test Reports | 9/18/13 | 10/1/2013 | $1,606,813 |
| 28 | 4588 | Training Materials | 9/30/13 | 10/1/2013 | $1,606,813 |
| 29 | 4993 | User Manuals | 9/30/13 | 10/1/2013 | $1,606,813 |
| 30 | 5001 | System Security Plan | 9/30/13 | 10/1/2013 | $1,606,813 |
| 31 | 5009 | Information Security Risk Assessment | 9/30/13 | 10/1/2013 | $1,606,813 |
| 32 | 4545 | Go-Live Document | 11/7/13 | 12/1/2013 | $1,606,813 |
| | | **Total Deliverables** | | | **$32,136,258** |

**L-1.2 Hourly Rate Table for Change Orders Pertaining to SOW #1**

This table L-1.2 includes hourly rates for potential Change Orders. The Supplier understands that there is no commitment from the SOV to purchase Change Orders.

For avoidance of doubt, as set forth on page 2, all payments are subject to SOV's acceptance for any monthly fee, license fee, deliverable fee, or milestone-related fee.

| Staff Classifications | Hourly Rate |
|---|---|
| Technical Lead/DBA | $256.25 |
| Technical Analyst | $218.75 |
| Business/Configuration Analyst | $206.25 |
| Programmer | $193.75 |
| Trainer | $206.25 |
| Technical Writer | $87.50 |
| Tester | $206.25 |
| Security Analyst | $218.75 |
| Senior SME | $281.25 |
| Technical Architect | $331.25 |
| Subject Matter Expert | $243.75 |

**The L-4 tabs that follow provide the payment provisions for SOW#4**

# L-4 PAGE DIVIDER

# TABS THAT FOLLOW PROVIDE PAYMENT PROVISIONS FOR SOW #4

**Vermont HBE**

**L-4.1 Monthly Hosting Services During Design, Development and Implementation**

This table L-4.1 provides expected monthly amounts for the application support, implmentation of the Hosting Services and the software license maintenance during the DDI period. All payments are subject to SOV acceptance of the Hosting Services.

For avoidance of doubt, as set forth on page 2, all payments are subject to SOV's acceptance for any monthly fee, license fee, deliverable fee, or milestone-related fee.

| Services | Expected Invoice Date | Invoice Amount | |
|---|---|---|---|
| Usage of the Hosting Services | | $ 155,088.00 | |
| Full Implementation of the Dedicated Vblock Hosting Environment | | 535,732.00 | |
| Software Maintenance | | 181,653.00 | |
| | 3/1/13 | $ **872,473.00** | This payment was based on Amendment 1 costs. |
| Application Support in Hosting Services | | $ 155,088.00 | |
| Full Implementation of Hosting Services | | 52,854.00 | |
| Software Maintenance | | 56,910.75 | |
| | 4/5/13 | $ **264,852.75** | This payment was adjusted based on overpayment from 3/1/13 and lower costs of Amendment 2 |
| Application Support in Hosting Services | | $ 155,088.00 | |
| Full Implementation of Hosting Services | | 294,293.00 | |
| Software Maintenance | | 119,281.88 | |
| | 5/1/13 | $ **568,662.88** | |
| Application Support in Hosting Services | | $ 155,088.00 | |
| Full Implementation of Hosting Services | | 294,293.00 | |
| Software Maintenance | | 119,281.88 | |
| | 6/1/13 | $ **568,662.88** | |
| Application Support in Hosting Services | | $ 155,088.00 | |
| Full Implementation of Hosting Services | | 294,293.00 | |
| Software Maintenance | | 119,281.88 | |
| | 7/1/13 | $ **568,662.88** | |
| Application Support in Hosting Services | | $ 155,088.00 | |
| Full Implementation of Hosting Services | | 294,293.00 | |
| Software Maintenance | | 119,281.88 | |
| | 8/1/13 | $ **568,662.88** | |
| Application Support in Hosting Services | | $ 155,088.00 | |
| Full Implementation of Hosting Services | | 294,293.00 | |
| Software Maintenance | | 119,281.88 | |
| | 9/1/13 | $ **568,662.88** | |
| Application Support in Hosting Services | | $ 155,084.00 | |
| Full Implementation of Hosting Services | | 294,296.00 | |
| Software Maintenance | | 119,281.88 | |
| | 11/7/13 | $ **568,661.88** | |
| **Application Support in Hosting Services** | | **$ 1,240,700.00** | |
| **Full Implementation of Hosting Services** | | **$ 2,354,347.00** | |
| **Software Maintenance** | | **$ 954,255.00** | |
| **Total** | | **$ 4,549,302.00** | |

***Vermont HBE***

**L-4.2 License Costs**

This table L-4.2 provides the Liscense costs.

For avoidance of doubt, as set forth on page 2, all payments are subject to SOV's acceptance for any monthly fee, license fee, deliverable fee, or milestone-related fee.

| Product | Vendor | Description | License Type | License Cost |
|---|---|---|---|---|
| OneGate | Exeter | | Enterprise | $ 5,764,706.00 |
| ALMComplete | SmartBear | - Requirements Management<br>- Defect tracking | 38 Concurrent Users | $ 29,348.38 |
| WebLoad | RadView | Load and Performance Testing | 1000 Virtual Users | $ 40,000.00 |
| Ensemble | CGI | Internal (CGI) document repository (Issue, Change, Risk, Collaboration, Doc Repository) | | $ 19,037.00 |
| ER/Studio | Embarcadero Technologies | Data modeling and metadata management software | 3 User License | $ 17,985.00 |
| XML Spy | Altova | XML Editing Tool | Enterprise | $ 1,154.00 |
| Loqate Verify (Address Verification for USA) | Loqate | Address locations for Oracle Enterprise Data Quality Address Verification Server | 1 Server | $ 3,464.00 |
| Liferay Enterprise Edition | FOSS/LGPL | 6 Servers 8 cores | 2-Production, 5-Non-Production, 2-DR | $ 205,275.00 |
| JAWS | Freedom Scientific | - ADA Compliance verification<br>- Usability Testing | 1 License | $ 1,264.00 |
| Thunderhead NOW | Thunderhead | Simple Correspondence | 300K | $ 222,750.00 |
| soapUI Pro | soapui.org | Web services test tool; supports automation of web services inspection, invocation, simulation, mockup, functional, load, and compliance tests | 10 Licenses | $ 11,618.00 |
| Java PDF417, QR Code Generator | KeepAutomation | | Corporate Developer License Linear 1D + 2D Package | $ 3,694.00 |
| Splunk | splunk.com | | 500 megabyte-per- | $ 6,928.00 |
| AccVerify | HiSoftware | 508 Compliance Check | 2 User License for 2 Years | $ 3,169.00 |
| ATSM | CGI | Test Automation and Regression, Case Loading and Support | n/a | $ 36,000.00 |
| Data Masker | Net2000 | Test and Development Data creation and manipulation; The one-time license fee for a platform/seat implementation is $4,950 plus first years support of $990 (20% of the license fee) which is mandatory in the first year | 1 license | $ 5,940.00 |
| SnagIt | TechSmith | Test Defect Recording and Playback | 25 users | $ 779.75 |
| Crossbrowsertesting.com | Crossbrowsertesting.com | Web compatibility | 5 Users | $ 500.00 |
| CGI SWAT | CGI | Agile tool, sprint management | | $ - |
| Checkstyle | FOSS/LGGPL | Coding Standards (JAVA) | Open Source | $ - |
| Cobertura | FOSS/GGPL | Code Coverage (Java) | Open Source | $ - |
| CSSAnalyzer | | Usability Testing Tools | Open Source | $ - |
| Eclipse | eclipse.org | Java IDE | Open Source | $ - |
| FindBugs | FOSS/LGGPL | Coding Standards (JAVA) | Open Source | $ - |
| Google Analytics | Google | Web Analytics | Free | $ - |
| Javadoc | Oracle | Documentation (Java) | Open Source | $ - |
| JavaNCSS | FOSS/GGPL | Code Metrics (Java) | Open Source | $ - |
| Jenkins/Hudson | FOSS/MIT | Continuous Integration Server | Open Source | $ - |
| Junit | FOSS/CPL | Unit Testing tool | Open Source | $ - |
| Maven | FOSS/Apache | Build Tool | Open Source | $ - |
| Quartz | FOSS/Apache | | Open Source | $ - |
| Selenium | FOSS/Apache | Web application record/playback tool used for regression testing of the user interface | Open Source | $ - |
| SLF4J | FOSS/MIT | | Open Source | $ - |
| SONAR | FOSS/LGGPL | Coding Standards (JAVA) (Code Quality Metrics) | Open Source | $ - |
| SpringSource | Vmware | Java IDE | Open Source | $ - |
| Subversion | FOSS/Apache | Version Control | Open Source | $ - |
| | | | **Subtotal All Items** | **$ 6,373,612.13** |

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**L-4.3 Annual Maintenance & Operation (M&O) Services**

This table L-4.3 provides the fixed Maintenance & Operation (M&O) and Hosting costs for each contract time period. The notes below the table indicate how the monthly amount for each contract period is derived. The Supplier understands that there is no commitment from the SOV to extend the contract term beyond the base years unless it is reduced to writing in an amendment signed by both parties.

For avoidance of doubt, as set forth on page 2, all payments are subject to SOV's acceptance for any monthly fee, license fee, deliverable fee, or milestone-related fee.

| Line # | Exchange Component | Fixed Costs for Period | |
|---|---|---|---|
| 1 | M&O Base Contract Year 1 (10/1/13 - 9/30/14)[1]: | | |
| | Fixed Software Maintenance | $ | 1,457,282.00 |
| | Fixed Operations Application Support Services Cost | $ | 1,994,100.00 |
| | Fixed Operations Hosting Cost | $ | 2,847,865.00 |
| 2 | M&O Base Contract Year 2 (10/1/14 - 12/31/14)[2]: | | |
| | Fixed Software Maintenance | $ | 365,365.00 |
| | Fixed Operations Application Support Services Cost | $ | 498,520.00 |
| | Fixed Operations Hosting Cost | $ | 802,625.00 |
| 3 | M&O Optional Contract Year 1 (1/1/15 - 12/31/15)[1]: | | |
| | Fixed Software Maintenance | $ | 1,062,537.00 |
| | Fixed Operations Application Support Services Cost | $ | 1,994,100.00 |
| | Fixed Operations Hosting Cost | $ | 2,539,448.00 |
| 4 | M&O Optional Contract Year 2 (1/1/16 - 12/31/16)[1]: | | |
| | Fixed Software Maintenance | $ | 1,066,873.00 |
| | Fixed Operations Application Support Services Cost | $ | 1,994,100.00 |
| | Fixed Operations Hosting Cost | $ | 2,527,983.00 |
| | **Total** | **$** | **19,150,798.00** |

[1] *For Lines 1, 3 and 4 the yearly amount for Fixed Software Maintenance and the Fixed Operations Costs (both Services & Hosting) will be invoiced monthly in arrears at 1/12 of the yearly amount.*

[2] *For Line 2 the amount for Fixed Software Maintenance and the Fixed Operations Cost (both Services & Hosting) will be invoiced monthly in arrears at 1/3 of the amount for the period.*

**Table L-4.4 Hourly Rate Table for Change Orders Pertaining to SOW #4**

This table L-4.4 includes hourly rates for potential Change Orders.
The Supplier understands that there is no commitment from the SOV to purchase Change Orders. The rates in this schedule are for enhancements or other Change Orders in excess of the 2,000 hours already covered in the ongoing M&O fees on Tables L-4.1 and L-4.2

For avoidance of doubt, as set forth on page 2, all payments are subject to SOV's acceptance for any monthly fee, license fee, deliverable fee, or milestone-related fee.

| Staff Classifications | Hourly Rate |
|---|---|
| Technical Lead/DBA | $256.25 |
| Technical Analyst | $218.75 |
| Business/Configuration Analyst | $206.25 |
| Programmer | $193.75 |
| Trainer | $206.25 |
| Technical Writer | $87.50 |
| Tester | $206.25 |
| Security Analyst | $218.75 |
| Senior SME | $281.25 |
| Technical Architect | $331.25 |
| Subject Matter Expert | $243.75 |

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**L-4.5 Hosting Environment Cost**

This table L-4.5 provides the hosting cost by environment, application support cost and software license maintenance costs for each of the delivery time periods.

For avoidance of doubt, as set forth on page 2, all payments are subject to SOV's acceptance for any monthly fee, license fee, deliverable fee, or milestone-related fee.

| | Environments | VM | App Support | Cloud Infra/Support | Total | |
|---|---|---|---|---|---|---|
| DDI 8mos | Production | 50 | $ 1,240,700.00 | $ 660,966.00 | $ 1,901,666.00 | |
| DDI 8mos | Staging | 50 | $ - | $ 386,871.00 | $ 386,871.00 | |
| DDI 8mos | Testing | 20 | $ - | $ 235,721.00 | $ 235,721.00 | |
| DDI 8mos | Training | 20 | $ - | $ 209,352.00 | $ 209,352.00 | |
| DDI 8mos | Development | 20 | $ - | $ 254,707.00 | $ 254,707.00 | |
| DDI 8mos | Disaster Recovery | 50 | $ - | $ 606,730.00 | $ 606,730.00 | |
| | | 210 | $ 1,240,700.00 | $ 2,354,347.00 | $ 3,595,047.00 | total |
| | **Software Maintenance** | | | $ 954,255.00 | | |
| | **Grand Total** | | | $ 4,549,302.00 | | |
| Year 1 | Production | 50 | $ 1,994,100.00 | $ 799,518.00 | $ 2,793,618.00 | |
| Year 1 | Staging | 50 | | $ 467,967.00 | $ 467,967.00 | |
| Year 1 | Testing | 20 | $ - | $ 285,132.00 | $ 285,132.00 | |
| Year 1 | Training | 20 | $ - | $ 253,237.00 | $ 253,237.00 | |
| Year 1 | Development | 20 | $ - | $ 308,099.00 | $ 308,099.00 | |
| Year 1 | Disaster Recovery | 50 | $ - | $ 733,912.00 | $ 733,912.00 | |
| | | 210 | $ 1,994,100.00 | $ 2,847,865.00 | $ 4,841,965.00 | total |
| | **Software Maintenance** | | | $ 1,457,282.00 | | |
| | **Grand Total** | | | $ 6,299,247.00 | | |
| Yr 2 (3mos) | Production | 50 | $ 498,520.00 | $ 225,331.00 | $ 723,851.00 | |
| Yr 2 (3mos) | Staging | 50 | | $ 131,889.00 | $ 131,889.00 | |
| Yr 2 (3mos) | Testing | 20 | $ - | $ 80,360.00 | $ 80,360.00 | |
| Yr 2 (3mos) | Training | 20 | $ - | $ 71,371.00 | $ 71,371.00 | |
| Yr 2 (3mos) | Development | 20 | $ - | $ 86,833.00 | $ 86,833.00 | |
| Yr 2 (3mos) | Disaster Recovery | 50 | $ - | $ 206,841.00 | $ 206,841.00 | |
| | | 210 | $ 498,520.00 | $ 802,625.00 | $ 1,301,145.00 | total |
| | **Software Maintenance** | | | $ 365,365.00 | | |
| | **Grand Total** | | | $ 1,666,510.00 | | |
| Year 3 | Production | 50 | $ 1,994,100.00 | $ 723,935.00 | $ 2,718,035.00 | |
| Year 3 | Staging | 50 | | $ 485,701.00 | $ 485,701.00 | |
| Year 3 | Testing | 20 | $ - | $ 267,392.00 | $ 267,392.00 | |
| Year 3 | Training | 20 | $ - | $ 247,769.00 | $ 247,769.00 | |
| Year 3 | Development | 20 | $ - | $ 260,659.00 | $ 260,659.00 | |
| Year 3 | Disaster Recovery | 50 | $ - | $ 553,992.00 | $ 553,992.00 | |
| | | 210 | $ 1,994,100.00 | $ 2,539,448.00 | $ 4,533,548.00 | total |
| | **Software Maintenance** | | | $ 1,062,537.00 | | |
| | **Grand Total** | | | $ 5,596,085.00 | | |
| Year 4 | Production | 50 | $ 1,994,100.00 | $ 717,454.00 | $ 2,711,554.00 | |
| Year 4 | Staging | 50 | | $ 485,923.00 | $ 485,923.00 | |
| Year 4 | Testing | 20 | $ - | $ 250,688.00 | $ 250,688.00 | |
| Year 4 | Training | 20 | $ - | $ 245,738.00 | $ 245,738.00 | |
| Year 4 | Development | 20 | $ - | $ 258,982.00 | $ 258,982.00 | |
| Year 4 | Disaster Recovery | 50 | $ - | $ 569,198.00 | $ 569,198.00 | |
| | | 210 | $ 1,994,100.00 | $ 2,527,983.00 | $ 4,522,083.00 | total |
| | **Software Maintenance** | | | $ 1,066,873.00 | | |
| | **Grand Total** | | | $ 5,588,956.00 | | |

**Reconciliation to Exhibit L-2:**

| | |
|---|---|
| Grand Total DDI 8 months (from above) | $ 4,549,302.00 |
| Grand Total Year 1 (from above) | $ 6,299,247.00 |
| Grand Total Year 2 (3 mths) (from above) | $ 1,666,510.00 |
| Grand Total Year 3 (from above) | $ 5,596,085.00 |
| Grand Total Year 4 (from above) | $ 5,588,956.00 |
| Add Software Licenses (presented in L-4 but not above) | $ 6,373,612.13 |
| **Total** | **$ 30,073,712.13** |

## L-4.6 SOW #4 Summary: Hosting Services

This table L-4.6 summarizes the costs per category in SOW #4. The Supplier understands that there is no commitment from the SOV to extend the contract term beyond the base years unless it is reduced to writing in an amendment signed by both parties.

For avoidance of doubt, as set forth on page 2, all payments are subject to SOV's acceptance for any monthly fee, license fee, deliverable fee, or milestone-related fee.

### SOW #4 Summary

| | | |
|---|---|---|
| Hosting Services During DDI | | |
| Application Support in Hosting Services | $ | 1,240,700.00 |
| Full Implementation of Hosting Services | $ | 2,354,347.00 |
| Software Maintenance | $ | 954,255.00 |
| License Costs | | |
| Configuration Total | $ | 6,373,612.13 |
| M&O Hosting Services | | |
| Contract Base Year 1 Total | $ | 6,299,247.00 |
| Contract Base Year 2 Total | $ | 1,666,510.00 |
| Optional Contract Year 1 | $ | 5,596,085.00 |
| Optional Contract Year 2 | $ | 5,588,956.00 |
| **Grand Total of SOW# 4 Payments (Base Years)** | **$** | **18,888,671.13** |
| **Grand Total of SOW# 4 Payments (Base + Option Years)** | **$** | **30,073,712.13** |

## Amended and Restated Statement of Work No. 1

This Amended and Restated Statement of Work Number 1 ("**Statement of Work**" or "**SOW**"), dated as of July __, 2013 (the "**Restatement Date**") and issued pursuant to the Master Services Agreement dated as of December 13, 2012, as amended February 28, 2013, and July __, 2013 (the "**MSA**") between State of Vermont ("**SOV**") and CGI Technologies and Solutions Inc. ("**Supplier**"). This Statement of Work incorporates the terms and conditions of the MSA as if the MSA were fully set forth in the text of this Statement of Work. Capitalized terms not defined in this Statement of Work are defined in the MSA.

**0, AMENDMENT AND RESTATEMENT.**

SOV and Supplier previously entered into that certain Statement of Work No. 1, dated December 17, 2012 (the "Original SOW#1"). SOV and Supplier desire to amend and restate the Original SOW#1 in its entirety, and, accordingly, this SOW shall supersede and replace the Original SOW#1 as of the Restatement Date.

**1. EFFECTIVE DATE AND TERM OF THIS STATEMENT OF WORK.**

This Statement of Work is effective as of December 17, 2012 ("**Statement of Work Effective Date**") and shall continue through December 31, 2014, which shall constitute the "**Statement of Work Term**". The Statement of Work Term may be extended for up to two (2) one-year periods, at the option of SOV.

**2. SERVICES TO BE PERFORMED AND SCHEDULE OF PERFORMANCE.**

A. Scope of Services

The Supplier will provide IT Services based on the Functional Requirement Traceability Matrix (the "**Functional RTM**") attached here as Schedule A to this SOW and incorporated herein by reference. Additional specificity regarding the scope of Services is provided for in Exhibit E (Scope Assumptions) to the MSA.

B. Location of Services.

Supplier will perform Services under this SOW at a SOV provided facility. Supplier will also perform testing services at its facility in Belton, Texas.

C. Deliverables and Work Product.

CGI will perform or deliver, as applicable, the deliverables as set forth in the MSA, including, without limitation, the deliverables as set forth in Exhibit E and Exhibit L attached to the MSA (including a cost schedule and an executive summary). Additional details regarding the deliverables and work product are documented in the Project Management Plan ("**PMP**").

D. Milestone Schedule

Supplier will provide the Services in accordance with the timeframes set forth in the Baseline Schedule. A list of Critical Milestones subject to liquidated damages is included in Exhibit C.

E. Acceptance Criteria and Process.

The Deliverable acceptance criteria and process is set forth in the PMP.

F. Supplier Personnel.

Process for approval of Supplier Personnel in Key Supplier Positions is described in the MSA and Exhibit E.

G. Supplier Resources.
Description of Supplier Resources will be set forth in the PMP. A list of Supplier Resources is included in Exhibit E (Scope Assumptions).

H. SOV Roles and Responsibilities.
1. Services or Support: See Exhibit E (Scope Assumptions) to the MSA.
2. Facilities, Equipment and SOV Resources: See Exhibit E (Scope Assumptions) to the MSA.
3. Proprietary Materials: SOV will provide licenses for all Oracle products.

I. Governance Structure, Meetings and Reports.
Governance Structure, Operation and Executive level meeting process and weekly status report standards will occur as set forth in the PMP.

J. Termination for Convenience.
Notwithstanding Section 26.3 of the MSA, at any time prior to the date fifteen (15) days after executing this SOW, SOV shall have the right to terminate this Statement of Work, in whole or in part, for convenience and without cause by providing Supplier with not less than fifteen (15) days prior written notice. Upon any such termination, SOV shall have no liability other than to (i) pay Supplier Charges for Services rendered up to and including the effective date of termination; and (ii) reimburse Supplier for Pass-Through Expenses incurred by Supplier to procure Software or Hardware for SOV pursuant to Section 6 and 7 below, or as approved by SOV pursuant to a Change Order. In the event of a termination in part, Charges will be adjusted in accordance with Section 26.4.

## 3. HOSTING SERVICES.

See SOW # 4.

## 4. PROJECT MANAGERS.

See Exhibit E (Scope Assumptions) to the MSA.

## 5. STAFF.

A. Subcontractors.

Supplier has engaged Exeter Consulting (and its affiliates) to configure the OneGate product. The scope of the subcontractor configuration work is set forth in the PMP and the RTM.

**6. SOFTWARE.**

Not applicable to this SOW.

**7. HARDWARE.**

Not applicable to this SOW.

**8. THIRD PARTY CONTRACTS.**

Not applicable to this SOW.

**9. SERVICE LEVELS.**

See SOW # 4.

**10. SECURITY, DISASTER RECOVERY, BUSINESS CONTINUITY PROCEDURES, CONTROLS**

As required by the MSA.

**11. FORECASTING**

Any forecasting needed is as set forth in in the PMP.

**12. FACILITIES TO BE PROVIDED BY SUPPLIER.**

Not applicable.

**13. ASSUMPTIONS.**

See Exhibit E (Scope Assumptions) attached to the MSA.

**14. OPTIONAL SERVICES.**

Not applicable to this SOW.

**15. OTHER SERVICES.**

Not applicable to this SOW

**16. CHARGES AND PASS-THROUGH EXPENSES.**

A. See Exhibit L (Cost) attached to the MSA.

Agreed to and accepted by:

| CGI Technologies and Solutions Inc. (CGI) | State of Vermont |
|---|---|
| By:_____ | By:_____ |
| Name:_____ | Name:_____ |
| Title:_____ | Title:_____ |
| Date:_____ | Date:_____ |

# SCHEDULE A

## Functional RTM

[see attached]

| Ref Code | Category | Sub Category | Application or Module | Requirement Description "The system shall..." | Current Disposition |
|---|---|---|---|---|---|
| PM-001 | Plan Management | N/A | OneGate | Provide a business rules engine that can support Exchange, State and federal Plan Management rules | Validated |
| PM-002 | Plan Management | N/A | OneGate | Provide a business rules engine that allows trained authorized business users to configure Exchange rules | Validated |
| PM-003 | Plan Management | N/A | OneGate | Provide the ability define a begin and end date for a plan enrollment period | Validated |
| PM-004 | Plan Management | N/A | OneGate | Allow for multiple enrollment periods during a calendar year. | Validated |
| PM-005 | Plan Management | N/A | OneGate | Provide the ability open a special enrollment period to enable enrolling a plan outside the defined enrollment period. | Validated |
| PM-006 | Plan Management | Initiate QHP Issuer App | SERFF | Provide the ability, upon request, to generate, publish and send Issuers an electronic Request for Notification of Intent to Apply for QHP certification. Requests will include instructions for application submission. | Deleted |
| PM-007 | Plan Management | Initiate QHP Issuer App | SERFF | Provide the ability for Issuers to submit an electronic Notification of Issuer's Intent to Apply, including all mandatory information | Deleted |
| PM-008 | Plan Management | Initiate QHP Issuer App | SERFF | Provide Issuers with the ability to initiate an application for Issuer certification and be directed to application requirements | Deleted |
| PM-009 | Plan Management | Initiate QHP Issuer App | SERFF | Provide the ability to capture and store at a minimum the following Issuer information as part of the Notification of Intent to Apply:<br>- Issuer ID<br>- NAIC Number<br>- Issuer Name<br>- license<br>- Solvency<br>- certifications<br>- complaint history<br>- accreditation date<br>- accreditation status | Deleted |
| PM-010 | Plan Management | Initiate QHP Issuer App | SERFF | Provide the ability to receive, store and track the information included in the Notification of Issuer's Intent to Apply | Deleted |
| PM-011 | Plan Management | Initiate QHP Issuer App | Manual | Provide interface/query to state database and/or state License system in order to validate Issuer information | Deleted |
| PM-012 | Plan Management | Initiate QHP Issuer App | Manual | Provide the ability to electronically notify Issuer of validation or non-validation | Deleted |



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| PM-013 | Plan Management | Initiate QHP Issuer App | SERFF | Provide the ability to establish and/or verify the existence of an Issuer ID | Validated |
| PM-014 | Plan Management | Initiate QHP Issuer App | Manual | Provide Exchange staff the ability to verify Issuer licensure | Deleted |
| PM-015 | Plan Management | Initiate QHP Issuer App | Manual | Provide the ability to notify the Issuer when an ID has been established | Deleted |
| PM-016 | Plan Management | Initiate QHP Issuer App | SERFF | Allow Issuers to initiate product submissions for approval, for products to be offered on the Exchange | Deleted |
| PM-017 | Plan Management | Initiate QHP Issuer App | SERFF | Allow the issuer to classify applications to indicate Issuer type: licensed to sell outside the Exchange OR licensed to sell on the Exchange | Deleted |
| PM-018 | Plan Management | Initiate QHP Issuer App | SERFF | Allow the issuer to classify applications to indicate Product type: qualified to sell outside Exchange Or on the Exchange Market type: Individual market, small group, large group, Medicaid | Deleted |
| PM-019 | Plan Management | Initiate QHP Issuer App | SERFF | Allow the issuer to classify applications to indicate Exchange Market type: Individual market, small group, large group, Medicaid | Validated |
| PM-020 | Plan Management | Initiate QHP Issuer App | SERFF | Provide the ability to record multiple counties and multiple zip codes by plan to reflect the geographic service area covered by a plan | Deleted |
| PM-021 | Plan Management | Initiate QHP Issuer App | SERFF | Provide multiple levels of categorization of plans to identify different plan 'types' and allow for multiple types of plans (e.g. Line of Business, PPO vs. HMO, Pre-Paid 7A/7B, etc.) | Validated |
| PM-022 | Plan Management | Initiate QHP Issuer App | SERFF | Provide ability to identify those plans that contain pediatric essential dental benefit | Validated |
| PM-023 | Plan Management | Initiate QHP Issuer App | SERFF | Provide ability to identify those plans that contain pediatric essential vision benefit | Validated |
| PM-024 | Plan Management | Initiate QHP Issuer App | SERFF | Provide the capability for issuers to submit QHP certification, recertification, and decertification information in multiple formats including batch upload in a format determined by the Exchange, and direct data entry. This information may include issuer and product plan administrative information, network data, benefit data, rate data, marketing materials, and issuer/product plan attestations. | Deleted |



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| PM-025 | Plan Management | Initiate QHP Issuer App | SERFF | Provide the ability to receive data from issuers on at least the following elements: issuer characteristics, product design and rating rules for approval. | Deleted |
| PM-026 | Plan Management | Initiate QHP Issuer App | SERFF | Store information about each plan offered within the Exchange, as required to support-plan-analysis. Examples of product plan data includes:<br>- Benefits structure/cost sharing requirements<br>- Quality measures and rating data (potentially through existing accreditation entities reporting mechanisms)<br>- Rates<br>- Co-pay and cost sharing information | Validated |
| PM-027 | Plan Management | Establish Issuer and Plan Renewal and Recertification | TBD | Be able to display a variety of data about a plan to help determine the decision to renew including:<br>- Performance Data<br>- Quality Data<br>- Complaint Data<br>- Coverage data<br>- Benefits and rates | Deleted |
| PM-028 | Plan Management | Establish Issuer and Plan Renewal and Recertification | Manual | The system must allow the Exchange staff to indicate which plans will be requested to be renewed and which will not. | Deleted |
| PM-029 | Plan Management | Establish Issuer and Plan Renewal and Recertification | Manual | The system must, upon request, generate and send electronic renewal request to Issuers about the plans desired to be renewed, requesting an notification of intent to renew. | Deleted |
| PM-030 | Plan Management | Establish Issuer and Plan Renewal and Recertification | Manual | The system must be able to receive notifications from Issuers regarding intent to renew or not renew a plan | Deleted |



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| PM-031 | Plan Management | Initiate QHP Issuer App | SERFF | Proposed solutions may include storage and maintenance of provider networks, or may include functionality to provide a hyperlink to issuer databases. If the option is chosen to store provider networks, the system must support ongoing maintenance through links with the issuers. | Deleted |
| PM-032 | Plan Management | Initiate QHP Issuer App | Manual | Provide the ability to evaluate networks against specific criteria as defined by the Exchange | Deleted |
| PM-033 | Plan Management | Initiate QHP Issuer App | TBD | Provide ability to link consumer queries to Issuer databases and state data sets | Deleted |
| PM-034 | Plan Management | Initiate QHP Issuer App | SERFF | Capture and store Provider Information including:<br>- Provider type<br>- Accepting new patients y/n<br>- Provider demographic information<br>- Provider services information<br>Note: providers can be linked to multiple plans and multiple issuers | Deleted |
| PM-035 | Plan Management | Initiate QHP Issuer App | SERFF | Provide ability to validate an Issuer's certification to sell products within the State including but not limited to:<br>- Issuer Identifier<br>- State Certification Status<br>- Certification date | Deleted |
| PM-036 | Plan Management | Initiate QHP Issuer App | Manual | Provide the ability for Issuers to link information submitted in the Exchange system with information submitted separately to the Insurance Division for other regulatory requirements | Deleted |
| PM-037 | Plan Management | Initiate QHP Issuer App | SERFF | Provide ability to store Issuer information provided by Insurance Division into the Exchange system. Data can include:<br>- Certification information<br>- Plan approval<br>- Market Analysis results<br>- Audits<br>- Rate Reviews<br>- Quarterly Performance Data<br>- Suspensions or actions (if exist) | Deferred |



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| PM-038 | Plan Management | Evaluate QHP Issuer Application | SERFF | Provide ability for Exchange staff, and other authorized entities (e.g. Division of Medicaid, Insurance Division, etc. staff) to view Issuer and Plan information, update as needed and add additional data to support plan evaluation. | Deleted |
| PM-039 | Plan Management | Evaluate QHP Issuer Application | Manual | Provide the ability via an electronic interface with the appropriate state database resources to validate state insurance licensure, solvency and good standing | Deleted |
| PM-040 | Plan Management | Evaluate QHP Issuer Application | TBD | Provide interface/query capability with the appropriate CMS systems for plan management and financial management functions to return data about an Issuer. Examples of the data include, but are not limited to:<br>- Premium review results<br>- Complaints<br>- Rates of app denial<br>- Claims processing timeliness<br>- Claims denials<br>- Quality reporting | Deleted |
| PM-041 | Plan Management | Evaluate QHP Issuer Application | SERFF | Provide ability to separately approve or disapprove at least the following dimensions of an application: an issuer, a product and rates as separate and distinct elements of certification/recertification/decertification for each market segment (small group, individual). | Deleted |
| PM-043 | Plan Management | Evaluate QHP Issuer Application | SERFF | Provide ability for authorized users to view product information, request supplemental information, update as needed and add additional data to support product evaluation. | Deleted |
| PM-044 | Plan Management | Evaluate QHP Issuer Application | SERFF | Provide the ability to define a series of criteria fields that will be used to compare and rate plans. Criteria fields can be a variety of types including but not limited to:<br>- True/false or Yes/No<br>- Numerical values for use in calculations<br>- Numerical range fields (example: between x and x values)<br>- Text based fields for narrative criteria<br>- Fields that allow multiple values (text or number) | Deleted |
| PM-045 | Plan Management | Evaluate QHP Issuer Application | SERFF | Provide the ability to accommodate time-base criteria to support a defined timeframe for which the criteria is valid | Deleted |



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| PM-046 | Plan Management | Evaluate QHP Issuer Application | OneGate | Store historical criteria which is no longer in active use, or has expired for reference | Validated |
| PM-047 | Plan Management | Evaluate QHP Issuer Application | TBD | Provide ability for Plan Management workers to compare a proposed exchange plan portfolio to determine if there are gaps missing in coverage, network adequacy, tiers or other criteria. | Deleted |
| PM-048 | Plan Management | Evaluate QHP Issuer Application | SERFF | Provide the ability for Plan Management workers to verify Attestations and supporting documentation | Deleted |
| PM-049 | Plan Management | Evaluate QHP Issuer Application | TBD | Allow Plan Management workers to compare a proposed product portfolio against a set of criteria. Possible criteria would include, but not be limited to:<br>- Complaint<br>- Quality, including Accreditation status<br>- Benefit coverage<br>- Cost sharing<br>- Marketing material, etc. | Deleted |
| PM-050 | Plan Management | Evaluate QHP Issuer Application | SERFF | Accommodate variations in criteria by Market (individual, small group, large group). | Validated |
| PM-051 | Plan Management | Evaluate QHP Issuer Application | Manual | Accommodate variations in criteria by Issuer type (Exchange / Non-Exchange). | Deleted |
| PM-052 | Plan Management | Evaluate QHP Issuer Application | Manual | Provide functionality to track the QHP review workflow process. For example, the system will provide the ability to assign review tasks, note completion, and utilize checklists for review. | Deleted |
| PM-054 | Plan Management | Evaluate QHP Issuer Application | Manual | Provide the ability to electronically send Notice of Application Status to Issuer | Deleted |
| PM-055 | Plan Management | Evaluate QHP Issuer Application | SERFF | Provide the ability to distinguish plans and issuers certified for the Exchange from those that have applied but were denied, those that have expired or decertified. | Deleted |
| PM-056 | Plan Management | Evaluate QHP Issuer Application | SERFF | Provide authorized users the ability to enter and store reasons for acceptance or denial of a plan or Issuer into the Exchange | Deleted |



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| PM-057 | Plan Management | Evaluate QHP Issuer Application | Manual | Provide the ability to automatically generate formal letter of denial indicating that an Issuer and/or Plan has not been accepted into the Exchange | Deleted |
| PM-058 | Plan Management | Evaluate QHP Issuer Application | Manual | Provide the ability to generate letters though all stages of review process (including an electronic form of the letter) of denials; indicating that a issuer and/or productplan has/has not been accepted into the specific market (individual or small group) and/or the exchange. | Deleted |
| PM-059 | Plan Management | Rate and Benefit Information Receipt | SERFF | Provide the ability to receive and process Rate and Benefit Data for each product plan offered on the Exchange | Validated |
| PM-060 | Plan Management | Rate and Benefit Information Receipt | Manual | Ability to send notification to Issuers to submit rate and benefit information | Deleted |
| PM-061 | Plan Management | Rate and Benefit Information Receipt | SERFF | Provide Issuers with the ability to provide rate and benefit information in multiple formats including file upload in a format determined by the Exchange, and direct data entry. | Deleted |
| PM-062 | Plan Management | Rate and Benefit Information Receipt | SERFF | Allow benefit data to be collected in discrete elements, as defined by federal guidance and state requirements. For example, each category and subcategory of Essential Health Benefits must appear, along with cost-sharing requirements associated with the benefit. | Deleted |
| PM-063 | Plan Management | Rate and Benefit Information Receipt | SERFF | Allow Issuers to classify product plans as QHP-applicable and non-QHP-considered; and also classify within a market type (i.e. individual or small group) | Deleted |
| PM-064 | Plan Management | Rate and Benefit Information Receipt | SERFF | Provide the ability to receive rate tables *and/or* rating rules in multiple formats including electronic file in a format determined by the Exchange, and direct data entry. | Validated |



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| PM-065 | Plan Management | Rate and Benefit Information Receipt | SERFF | Perform data validation on rate/benefit data to ensure accuracy and completeness of supplied data. | Deleted |
| PM-066 | Plan Management | Rate and Benefit Information Receipt | SERFF | Provide electronic notification to Issuers regarding data issues related to rate and benefit information submission(s) | Deleted |
| PM-067 | Plan Management | Rate and Benefit Information Receipt | SERFF | Provide electronic notification to Issuer to provide Final Attestation for Rate/Benefit Data and Information | Deleted |
| PM-068 | Plan Management | Rate and Benefit Information Receipt | SERFF | Allow Insurance Issuers the ability to provide premium information in real-time or as part of the catalog in a batch upload. | Deleted |
| PM-069 | Plan Management | Revise QHP Issuer Application | SERFF | Provide Issuer the ability to withdraw an application for consideration for individual and small group market, and/or consideration in individual exchange and/or SHOP exchange | Deleted |
| PM-070 | Plan Management | Determine Issuer Plan Non-Certification | SERFF | Provide the ability to record the plan non-renewal event and status information, including date, reason/rationale | Deleted |
| PM-071 | Plan Management | Determine Issuer Plan Non-Certification | Manual | Produce electronic and/or paper notices to Issuers when a plan is decertified from Exchange | Deleted |
| PM-072 | Plan Management | Determine Issuer Plan Non-Certification | SERFF | Provide the ability to record the plan or issuer decertification event and status information, including date, reason/rationale | Deleted |
| PM-073 | Plan Management | Determine Issuer Plan Non-Certification | Manual | Produce electronic notification to Insurance Division when a Issuer/plan is not renewed or is decertified from the Exchange | Deleted |



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|---|---|---|---|---|---|
| PM-074 | Plan Management | Determine Issuer Plan Non-Certification | SERFF | Produce electronic notification to CMS when an Issuer/plan is not renewed or is decertified from the Exchange | Deferred |
| PM-075 | Plan Management | Determine Issuer Plan Non-Certification | SERFF | Provide the ability to define an option period for recertification and renewal. | Deleted |
| PM-076 | Plan Management | Determine Issuer Plan Non-Certification | SERFF | Send notification to the Insurance Division or other relevant state agencies of those Issuers and/or Plans which have been denied acceptance to participate in the Exchange. | Deleted |
| PM-077 | Plan Management | Establish QHP Certification and Agreement | SERFF | Provide the ability to open a special certification period to enable certifying an Issuer or Plan outside the defined certification period | Deleted |
| PM-078 | Plan Management | Establish QHP Certification and Agreement | SERFF | Provide the ability to record agreement information in the system including:<br>- Agreement ID<br>- Agreement begin date<br>- Agreement end date<br>- Plan Operations begin date<br>- Plan Operations end date | Deleted |
| PM-079 | Plan Management | Establish QHP Certification and Agreement | Manual | Provide the ability to generate a notification of certification into the Exchange | Deleted |
| PM-080 | Plan Management | Establish QHP Certification and Agreement | SERFF | Allow storage of agreement signature or acceptance date to indicate the Issuer agreement acceptance. | Deleted |
| PM-081 | Plan Management | Establish QHP Certification and Agreement | Manual | Provide ability to store an electronic copy of the agreement and associate it with a plan record so it can be retrieved and viewed when querying information about a plan. | Deleted |



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| PM-082 | Plan Management | Establish QHP Certification and Agreement | TBD | Determine the quality rating in accordance with CMS plan quality rating methodology. | Deferred |
| PM-083 | Plan Management | Establish QHP Certification and Agreement | SERFF | Display the metal rating of a plan (platinum, gold, silver, bronze) | Validated |
| PM-084 | Plan Management | Establish QHP Certification and Agreement | OneGate | Provide query of plans by issuer with calculated rating for other attributes to be determined by the Exchange. | Deferred |
| PM-085 | Plan Management | Establish QHP Certification and Agreement | OneGate | Provide the ability for plan information to be 'published' to the public exchange view when approval for plan is finalized | Validated |
| PM-086 | Plan Management | Establish QHP Certification and Agreement | OneGate | Provide the ability to display plan information on the public exchange view, including, but not limited to data such as:<br>- Plan title and description<br>- Plan quality rating<br>- Plan providers<br>- Out of pocket limits<br>- Annual deductible<br>- Doctor Choice<br>- Prescription Choice<br>- Monthly Premium<br>- Applicants Denied<br>- Plan Details<br>- Link to Issuer/Plan website<br>- Medical loss ratio<br>- Transparency in coverage<br>- Summary in benefits and coverage<br>- Levels of coverage<br>- Availability of in-network and out-of-network providers | Validated |



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| PM-087 | Plan Management | Establish QHP Certification and Agreement | OneGate | Provide the ability for plan information to be easily removed from the public exchange view if approval status of the plan changes | Validated |
| PM-088 | Plan Management | Establish QHP Certification and Agreement | Manual | Provide electronic data to the Insurance Division to indicate notice of issuers/plans approved for the Exchange. Data can include:<br>- Issuer ID<br>- Exchange certification date | Deleted |
| PM-089 | Plan Management | Establish QHP Certification and Agreement | SERFF | Provide the ability to store an electronic copy of the agreement and associate it with a plan record so it can be retrieved and viewed when querying information about a plan | Deleted |
| PM-090 | Plan Management | Establish Issuer and Plan Renewal and Recertification | SERFF | Support receipt of recertification data in the same manner used for initial certification. | Deleted |
| PM-091 | Plan Management | Establish Issuer and Plan Renewal and Recertification | SERFF | Support storage, view and processing of recertification data and analysis in the same manner used for initial certification. | Deleted |
| PM-092 | Plan Management | Establish Issuer and Plan Renewal and Recertification | SERFF | Distinguish if data and tracking activities are for initial certification or recertification | Deleted |
| PM-093 | Plan Management | Establish Issuer and Plan Renewal and Recertification | SERFF | Store and provide the capability to display on demand transactional history related to the QHP certification process, including but not limited to certification/decertification event and rationale for decertification events. | Deleted |



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| PM-094 | Plan Management | Establish Issuer and Plan Renewal and Recertification | SERFF | Store a record of all QHP negotiation steps, activities, and outcomes. | Deleted |
| PM-095 | Plan Management | Establish Issuer and Plan Renewal and Recertification | SERFF | Generate re-amendment notification and information storage consistent with the initial certification amendment process. | Deleted |
| PM-096 | Plan Management | Establish Issuer and Plan Renewal and Recertification | SERFF | Process agreement acceptance from Issuers consistent with the initial certification acceptance process | Deleted |
| PM-097 | Plan Management | Establish Issuer and Plan Renewal and Recertification | SERFF | Update Issuer and agreement information in the system consistent with the initial certification amendment process. | Deleted |
| PM-098 | Plan Management | Establish Issuer and Plan Renewal and Recertification | Manual/SERFF | Recertify the plan and notify issuers consistent with the initial certification process. | Deleted |
| PM-099 | Plan Management | Establish Issuer and Plan Renewal and Recertification | SERFF | Update CMS with certified plan information consistent with the initial certification process | Validated |
| PM-100 | Plan Management | Establish Issuer and Plan Renewal and Recertification | SERFF | The system must distinguish to CMS initial certified data from recertified plan data. | Deleted |



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| PM-102 | Plan Management | Monitor Issuer/Plan Compliance | Manual | Provide the ability to define performance monitoring periods (i.e. quarterly, monthly etc.) | Deferred |
| PM-103 | Plan Management | Monitor Issuer/Plan Compliance | TBD | Accept Issuer and plan performance data electronically from Issuers and the Insurance Division in support of periodic monitoring activities such as:<br>- HEDIS ratings<br>- Consumer perception ratings (CAHPS)<br>- Complaints<br>- Patient information programs<br>- Claims payment data<br>- Disenrollment data<br>- Denied claims<br>- Issuer ID<br>- Compliant data/summaries<br>- Sanction data (if any)<br>- Solvency Status<br>- Network Adequacy | Validated |
| PM-105 | Plan Management | Monitor Issuer/Plan Compliance | TBD | Accept Issuer and Plan data electronically from CMS in support of periodic monitoring activities such as:<br>-Issuer ID<br>-Plan ID<br>-Complaint data/summaries<br>-Other data to be determined by CMS | Deferred |
| PM-107 | Plan Management | Monitor Issuer/Plan Compliance | TBD | Track the receipt of performance and compliance data from Issuers and including date of receipt | Deleted |
| PM-108 | Plan Management | Monitor Issuer/Plan Compliance | TBD | Allow authorized users to track receipt of information received by Issuers in non-data formats, i.e. PDFs | Deleted |



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| PM-109 | Plan Management | Monitor Issuer/Plan Compliance | Manual | Allow recording results of compliance analysis, and the status of an issuer/plan meeting a variety compliance requirements such as:<br>- Benefits design standards - validation/tracking data<br>- Essential benefits<br>- Cost sharing limits<br>- Coverage levels<br>- Insurance Division certification status<br>- User fee compliance<br>- Risk adjustment participation compliance<br>- Plan offering compliance<br>- Non discrimination compliance<br>- Transparency requirements | Deferred |
| PM-110 | Plan Management | Monitor Issuer/Plan Compliance | SERFF & OneGate | Indicate the status of an Issuer/Plan compliance determination | Deferred |
| PM-111 | Plan Management | Monitor Issuer/Plan Compliance | SERFF | Allow for preliminary and final compliance determinations | Deferred |
| PM-112 | Plan Management | Monitor Issuer/Plan Compliance | SERFF | Retain historical compliance tracking information | Deferred |
| PM-113 | Plan Management | Monitor Issuer/Plan Compliance | Manual | Provide a compliance dashboard to indicate compliance analysis progress on Issuers/plans and the results of the compliance analysis through the compliance process | Deleted |
| PM-114 | Plan Management | Monitor Issuer/Plan Compliance | TBD | Provide a Performance indicator dashboard to aggregate performance data and display summary performance information by Issuer/Plan | Deleted |
| PM-115 | Plan Management | Monitor Issuer/Plan Compliance | Not for October 2013 | Calculate a quality rating for each plan according to a methodology determined by the Exchange. | Deferred |
| PM-116 | Plan Management | Monitor Issuer/Plan Compliance | OneGate | Retain historical plan quality ratings | Deferred |



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| PM-117 | Plan Management | Monitor Issuer/Plan Compliance | OneGate | Display the most current quality rating for each plan on the consumer website. | Deferred |
| PM-118 | Plan Management | Monitor Issuer/Plan Compliance | Manual | Produce electronic or paper notices for Issuers indicating the results of the compliance and quality reviews, i.e. the compliance and quality rating determination | Deleted |
| PM-119 | Plan Management | Maintain Operational Data | TBD | The system must accept electronic Issuer complaint data in a secure manner, from the Insurance Division on a monthly basis. | Deferred |
| PM-139 | Plan Management | Maintain Operational Data | TBD | Allow Issuers to submit new/changed marketing and Enrollee communication materials | Validated |
| PM-140 | Plan Management | Maintain Operational Data | TBD | Receive electronic files of marketing materials from Issuers | Validated |
| PM-141 | Plan Management | Maintain Operational Data | TBD | Allow users to be able to classify marketing materials from Issuers | Validated |
| PM-142 | Plan Management | Maintain Operational Data | OneGate | Store and track electronic files of marketing materials from Issuers | Validated |
| PM-143 | Plan Management | Maintain Operational Data | OneGate | Allow Plan Management staff to view electronic files of marketing materials | Validated |
| PM-144 | Plan Management | Maintain Operational Data | TBD | Track review and approval activities related to review of marketing materials | Validated |
| PM-145 | Plan Management | Maintain Operational Data | OneGate | Allow Marketing materials to be linked to appropriate plan/issuer records in the system. | Validated |
| PM-146 | Plan Management | Maintain Operational Data | OneGate | Provide capability to categorize marketing materials according to a schema defined by the Exchange | Validated |
| PM-147 | Plan Management | Maintain Operational Data | OneGate | Provide the ability to store links to websites that are references to marketing materials. The links must be able to be associated to appropriate Issuers/Plans. | Validated |



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| PM-148 | Plan Management | Maintain Operational Data | TBD | Track marketing material revision requests and the revision process, including tracking data about revision requests such as<br>- Issuer Identifier<br>- Plan Identifier<br>- Marketing Material content<br>- Material review process/tracking information<br>- Revision number | Deferred |
| PM-149 | Plan Management | Maintain Operational Data | TBD | Provide version control document management capabilities for submitted marketing materials in order to manage document submissions and revisions | Validated |
| PM-150 | Plan Management | Maintain Operational Data | TBD | Allow marketing material reviewers to create and send notifications to Issuers about requested revisions | Validated |
| PM-151 | Plan Management | Maintain Operational Data | TBD | Record approval information about marketing materials, including:<br>-Approver<br>-Approve Date<br>-Status | Validated |
| PM-152 | Plan Management | Maintain Operational Data | TBD | Upon approval of marketing materials, generate notification to Issuer regarding approval | Validated |
| PM-153 | Plan Management | Maintain Operational Data | TBD | Upon approval of marketing materials, provide update to Issuer's QHP Account Information | Validated |
| PM-154 | Plan Management | Maintain Operational Data | SERFF | Provide the ability for Issuers to submit Provider Network Information | Validated |
| PM-155 | Plan Management | Maintain Operational Data | OneGate | Provide ability for Exchange staff to view Provider information, update as needed and add additional data not provided electronically. | Deleted |



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| PM-156 | Plan Management | Maintain Operational Data | TBD | Accept electronic Provider network information by Issuer from the Insurance Division on a monthly basis. Provider data can include:<br>- Issuer data<br>- Provider data<br>- Provider Contract data<br>- Provider Business data | Duplicate |
| PM-161 | Plan Management | Maintain Operational Data | TBD | Provide the ability for historical Provider data to be saved to provide accurate historical representation of the Provider network at a given point in time | Deleted |
| PM-162 | Plan Management | Maintain Operational Data | Manual | Provide notices to be sent to plan consumers, Navigators and brokers if a Provider Network change requires consumer notification, according to rules defined by the Exchange. | Deferred |
| PM-163 | Plan Management | Maintain Operational Data | Manual | Provide ability for Insurance Issuer staff to view Provider information, update as needed and add additional data. It is anticipated that Issuers will have access to less Plan data fields that Exchange staff. Data may include:<br>- Plan Contact Information<br>- Call Center Information<br>- Addresses<br>- Website Addresses<br>- Management/Key Personnel/Ownership Changes<br>- Plan Name Changes<br>- Banking Information | Deferred |
| PM-164 | Plan Management | Maintain Operational Data | Manual | Notify authorized Exchange users when an Issuer has updated any Issuer, plan and provider data | Deleted |
| PM-165 | Plan Management | Maintain Operational Data | OneGate | Provide the ability for authorized Exchange user to view changes made by a Issuer to Issuer, Plan and Provider data | Deleted |
| PM-166 | Plan Management | Maintain Operational Data | OneGate | Provide ability for an authorized Exchange user to authorize changes made by a Issuer to be posted to the exchange. | Deleted |
| PM-167 | Plan Management | Maintain Operational Data | TBD | Store and track historical Issuer administrative data | Validated |



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| PM-168 | Plan Management | Maintain Operational Data | TBD | Provide ability for Issuers to electronically submit transparency and quality data such as:<br>- Issuer Identifier<br>- Transparency/quality Information:<br>- Payment policies and practices<br>- Financial disclosures<br>- Enrollment/disenrollment data<br>- Claims denials<br>- Rating practices<br>- Quality rating data | Deferred |
| PM-169 | Plan Management | Maintain Operational Data | TBD | Provide the ability to receive electronic documents of transparency or quality information from Issuers | Deferred |
| PM-171 | Plan Management | Maintain Operational Data | TBD | The system must be able to track the review steps and progress of transparency and quality data analysis including:<br>- When information was received<br>- Analytical steps<br>- Process status | Deferred |
| PM-172 | Plan Management | Process Change in Plan Enrollment Availability | Manual | Issuers must be able to electronically communicate a plan enrollment change to the Exchange system. Data required will include:<br>- Enrollment availability status<br>- Rates<br>- Effective dates<br>- Status indicating if new dependent enrollee's are still allowed | Deleted |
| PM-173 | Plan Management | Process Change in Plan Enrollment Availability | Manual | The Insurance Division must be able to electronically communicate a plan enrollment change to the Exchange system. Data required will include:<br>- Enrollment availability status<br>- Change justification<br>- Effective dates<br>- Status indicating if new dependent enrollee's are still allowed | Validated |



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|---|---|---|---|---|---|
| PM-174 | Plan Management | Process Change in Plan Enrollment Availability | TBD | Provide the ability to record the request for change in product availability including:<br>- Issuer Identifier<br>- Plan Identifier<br>- Plan Changes Effective Date<br>- Changed Plan Information:<br>- Enrollment close status<br>- Enrollment open status<br>- Justification information<br>- Requestor information<br>- Status of change request | Validated |
| PM-176 | Plan Management | Process Change in Plan Enrollment Availability | TBD | Provide the Exchange Plan Account Manager with the ability to review enrollment change request data and electronically approve or disapprove the enrollment notification or request. | Validated |
| PM-177 | Plan Management | Process Change in Plan Enrollment Availability | Manual | Upon approval of the enrollment change request, generate an electronic notification to the Insurance Division indicating the plan enrollment status | Deleted |
| PM-180 | Plan Management | Process Change in Plan Enrollment Availability | SERFF | Upon approval of the enrollment change request, send an update transaction to the appropriate CMS system for plan management and fiscal management functions indicating the plan enrollment status change and other information required by CMS | Validated |
| PM-182 | Plan Management | Process Change in Plan Enrollment Availability | TBD | Allow authorized Navigators/Brokers to manage subscriptions to appropriate Exchange notification functions and features | Validated |
| PM-183 | Plan Management | Issuer Account Mgt | OneGate | The system must allow issuers to create and manage user accounts. | Deleted |
| PM-184 | Plan Management | Issuer Account Mgt | OneGate | Certified issuers shall have the ability to list their QHPs in the Exchange catalog and present information on them. | Deleted |



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|---|---|---|---|---|---|
| PM-185 | Plan Management | Issuer Account Mgt | OneGate | Certified issuers shall have the ability to access the Exchange catalog and make updates to the products offered following formal approval of those updates by the State. | Deleted |
| PM-186 | Plan Management | Issuer Account Mgt | OneGate | Provide the ability for issuer and product information to be "published" to the public exchange view when approval is finalized. | Validated |
| PM-187 | Plan Management | Issuer Account Mgt | OneGate | Provide the ability for issuer and product information to be easily removed from the public exchange view if approval status changes | Validated |
| PM-188 | Plan Management | Issuer Account Mgt | SERFF | The system shall periodically submit data to the appropriate CMS system for plan management and fiscal management functions, as required by federal regulation. | Validated |
| PM-189 | Plan Management | Review Rate Increase Justifications | SERFF | Provide ability for Issuers to electronically submit rate and benefit data, and a justification for rate increase.<br>Rate Data may include:<br>- Rate Changes Effective Date<br>- Benefit Data<br>- Discretionary Benefits<br>- Services/Service Categories<br>- Related co-payments/deductibles<br>- Justification for Rate Increase<br>- Changes in Cost<br>- Utilization Changes | Deleted |
| PM-190 | Plan Management | Review Rate Increase Justifications | SERFF | Allow quarterly new enrollee 'trend up' rates to be submitted and stored, including the trend up dates in which the rates would become active. | Deleted |
| PM-191 | Plan Management | Review Rate Increase Justifications | SERFF | Provide the ability to turn a trend up rate on or off, i.e. allow an Issuer to submit a trend up rate but choose not to use it later. | Deleted |
| PM-192 | Plan Management | Review Rate Increase Justifications | SERFF | Screen submitted rate and benefit data and provide formatting error information back to the Issuer if data format is not correct | Deleted |
| PM-193 | Plan Management | Review Rate Increase Justifications | SERFF | Provide submitted rate and benefit data to the Insurance Division system and CMS electronically | Deleted |



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|---|---|---|---|---|---|
| PM-194 | Plan Management | Review Rate Increase Justifications | SERFF | Provide the ability for authorized users to view and utilize proposed rate and benefit data during the analysis of rate justifications. | Deleted |
| PM-195 | Plan Management | Review Rate Increase Justifications | SERFF | Provide the ability for users to track the steps/progress of rate justification analysis, including steps completed / not completed and dates | Deleted |
| PM-196 | Plan Management | Review Rate Increase Justifications | SERFF | Allow users to track communications with Issuers and Insurance Division to support the analysis/negotiations process | Deleted |
| PM-197 | Plan Management | Review Rate Increase Justifications | SERFF | Provide comparisons between current and proposed rates and plan benefits | Deleted |
| PM-198 | Plan Management | Review Rate Increase Justifications | SERFF | Provide the ability to receive/store/track multiple rate change justifications if multiple are submitted during the negotiation process or after a rate change denial. | Deleted |
| PM-199 | Plan Management | Review Rate Increase Justifications | Manual | If a rate increase is denied, generate a denial notice to the issuer both electronically, and as a formal notice that can be mailed. | Deleted |
| PM-200 | Plan Management | Review Rate Increase Justifications | SERFF | Upon approval of rate increase, generate an approval notice to the issuer both electronically, and as a formal notice that can be mailed. | Deleted |
| PM-201 | Plan Management | Review Rate Increase Justifications | Manual | Upon rate increase approval, update certification agreement data and relevant rate and benefit data, effective dates. | Validated |
| PM-202 | Plan Management | Review Rate Increase Justifications | TBD | Upon rate approval, send updated plan/rate/benefit data to the appropriate CMS system for plan management and fiscal management functions for determination of silver plans. | Deferred |
| PM-203 | Plan Management | Review Rate Increase Justifications | TBD | Provide the ability to receive and process second lowest cost silver plan ratings from the appropriate CMS system for plan management and fiscal management functions.<br>- Issuer Identifier<br>- Plan Identifier<br>- Rate Data<br>- Rating Factors | Validated |



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|---|---|---|---|---|---|
| PM-204 | Plan Management | Review Rate Increase Justifications | OneGate | Allow the authorized user to publish finalized rates and benefits data to the public facing Exchange. | Validated |
| PM-205 | Plan Management | Revise Rate and Benefit Data | SERFF | Track communications with Issuers and the Insurance Division to support the rate review analysis/negotiation process | Deleted |
| PM-206 | Plan Management | Revise Rate and Benefit Data | Manual | Track if a rate increase denial is being appealed by an Issuer (upon notification by the Issuer). | Deleted |
| PM-207 | Plan Management | Revise Rate and Benefit Data | SERFF | Provide ability for Issuers to re-submit rate and/or benefit information based on Request | Deleted |
| PM-208 | Plan Management | Revise Rate and Benefit Data | SERFF | Perform data validation checks on revised rate and/or benefit data and notify Issuer if additional corrections are required | Deleted |
| PM-209 | Plan Management | Revise Rate and Benefit Data | Manual | Provide a notification to Issuer to submit final Attestation | Deleted |
| PM-210 | Plan Management | Revise Rate and Benefit Data | Manual | Provide Issuers with ability to submit final Attestation | Deleted |
| PM-211 | Plan Management | Revise Rate and Benefit Data | Manual | Capture, store and track Issuer's final Attestation | Deleted |
| PM-212 | Plan Management | Revise Rate and Benefit Data | SERFF | Determine if Issuer provided rate and/or benefit data and information revisions within the designated time-frame | Deleted |
| PM-213 | Plan Management | Revise Rate and Benefit Data | SERFF | Provide electronic and hard-copy notification to Issuer of QHP rate/benefit data and information revision acceptance | Deleted |
| AD-000 | Program Integrity | Retroactive Eligibility Reconciliation | OneGate | Provide the ability to process retroactive eligibility changes including the reconciliation of insurance coverage payments. | Validated |
| EL-001 | Eligibility and Enrollment | General | OneGate/Oracle Identity Manager | Provide role-based access control to allow users to perform certain operations assigned to specific roles (e.g., Exchange Staff, Individuals, Brokers, and Navigators). | Validated |



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|---|---|---|---|---|---|
| EL-002 | Eligibility and Enrollment | Pre-Screening/ Screening | OneGate | Interface with the AHS/DCF Eligibility System to provide Individuals and authorized representatives with the option to complete pre-screening for eligibility for State health plans through a real-time interface with the AHS/DCF Eligibility System with the option for anonymous screening. | Validated |
| EL-004 | Eligibility and Enrollment | Pre-Screening | OneGate | The Exchange will provide expert-level pre-screening function to Navigators, Brokers, and Exchange Staff | Validated |
| EL-005 | Eligibility and Enrollment | Pre-Screening/ Screening | OneGate | Indicate whether an applicant is already enrolled in a publicly subsidized health coverage program. | Validated |
| EL-006 | Eligibility and Enrollment | Pre-Screening/ Screening | OneGate | Present a more detailed level of screening questions to be addressed at the option of the Individual. | Validated |
| EL-007 | Eligibility and Enrollment | State Subsidy | OneGate | Interface with the AHS/DCF Eligibility System to display eligibility information for VT subsidized public and commercial health plans available through the Exchange. | Validated |
| EL-008 | Eligibility and Enrollment | APTC/CSR | OneGate | Interface with the AHS/DCF Eligibility System to display eligibility information and supporting data for the Advance Premium Tax Credits and Cost Sharing Reductions. | Deleted |
| EL-009 | Eligibility and Enrollment | APTC/CSR | OneGate | Interface with the Federal Exchange Eligibility Service to display eligibility information and supporting data for the Advance Premium Tax Credits and Cost Sharing Reductions. | Validated |
| EL-010 | Eligibility and Enrollment | APTC/CSR | OneGate | Process the Advance Premium Tax Credit and Cost Sharing Reduction amount(s) provided by CMS/IRS and update the individual's account. | Validated |
| EL-011 | Eligibility and Enrollment | APTC/CSR | OneGate | Provide Individuals with the option to accept a lower Advance Premium Tax Credit. | Met |
| EL-012 | Eligibility and Enrollment | APTC/CSR | OneGate | Allow Exchange Staff, Individuals, Brokers, and Navigators to view alerts regarding the need to recalculate the tax credit when needed. | Validated |
| EL-013 | Eligibility and Enrollment | Individual Application & Submit Update | OneGate | Provide the capability for an Individual to identify the source of information used to determine eligibility. | Met |



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|---|---|---|---|---|---|
| EL-014 | Eligibility and Enrollment | Individual Application & Submit Update | OneGate | Provide individuals with the ability to acknowledge an eligibility determination. | Met |
| EL-015 | Eligibility and Enrollment | Individual Application & Submit Update | OneGate | Allow Exchange Staff to submit case information for eligibility determination outside of the standard workflow. | Validated |
| EL-016 | Eligibility and Enrollment | Individual Exemption from Responsibility | OneGate | Send real-time, automated notifications and written notices to Individuals of CMS determinations of exemption status, and update individual accounts accordingly. | Validated |
| EL-017 | Eligibility and Enrollment | Individual Application & Submit Update | OneGate | Provide the ability to generate online and written notification of the result of an Individual's eligibility determination, including the basis for denial if denied coverage. | Validated |
| EL-019 | Eligibility and Enrollment | Individual Application & Submit Update | OneGate | Send notifications to the Individuals, alerting them to submit required eligibility or verification information. | Validated |
| EL-020 | Eligibility and Enrollment | Individual Application & Submit Update | CGI | Send notifications to the Individuals who have not completed their applications informing them of the expiration date. | Validated |
| EL-021 | Eligibility and Enrollment | Individual Application & Submit Update | OneGate | Send notifications to the Individuals, Exchange Staff, Brokers, and Navigators of changes to Individuals' applications. | Validated |
| EL-022 | Eligibility and Enrollment | Individual Application & Submit Update | CGI | Send notifications to the Individuals regarding the enrollment process and the status of their application. | Met |
| EL-023 | Eligibility and Enrollment | Individual Application & Submit Update | OneGate | Determine if users requesting new access already have system access, assist known Individuals in recovering login information, and assist new Individuals in setting up access | Validated |



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|---|---|---|---|---|---|
| EL-024 | Eligibility and Enrollment | Individual Application & Submit Update | OneGate | Provide for the management of the Individual's application intake process, including viewing, updating and displaying the Individual's and household's eligibility history to authorized users. | Validated |
| EL-025 | Eligibility and Enrollment | Individual Application & Submit Update | Oracle MDM (Customer Hub) | Use a single Exchange-specified client identifier for all solution functions and interfaces, and provide cross-referencing to other system identifiers where required. | Validated |
| EL-026 | Eligibility and Enrollment | Individual Application & Submit Update | OneGate | Provide a consolidated online application for all programs offered through the Exchange, including but not limited to Medicaid, other VT public health and human service programs, and commercial health insurance subsidies. | Met |
| EL-027 | Eligibility and Enrollment | Individual Application & Submit Update | OneGate | Intake applicant information, including attachments, required to determine eligibility for publically subsidized health coverage programs offered through the Exchange. | Validated |
| EL-028 | Eligibility and Enrollment | Individual Application & Submit Update | | Route applicant data, and related attachments, to the AHS/DCF Eligibility System to determine real-time eligibility for publically subsidized programs and commercial health coverage programs offered through the Exchange. | Validated |
| EL-029 | Eligibility and Enrollment | Individual Application & Submit Update | OneGate | Route applicant data, and related attachments, to the Federal Exchange Eligibility Service to determine real-time eligibility for publically subsidized programs and commercial health coverage programs offered through the Exchange. | Met |
| EL-030 | Eligibility and Enrollment | Individual Application & Submit Update | N/A | Route eligibility related attachments from users to Medicaid/CHIP to support eligibility processing and determination. | Validated |
| EL-031 | Eligibility and Enrollment | Individual Application & Submit Update | OneGate | Provide the capability to identify Navigators and Brokers if they are completing applications on behalf of an Individual. | Validated |
| EL-032 | Eligibility and Enrollment | Individual Application & Submit Update | OneGate | Provide the capability for the Individual to attest that any information provided by a Navigator or Brokers is accurate. | Validated |



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|---|---|---|---|---|---|
| EL-033 | Eligibility and Enrollment | Pre-Screening/ Screening | OneGate | Interface with the AHS/DCF Eligibility System to provide Individuals and authorized representatives with the option to complete pre-screening for eligibility for Federal health plans through a real-time interface with the Federal Exchange Eligibility Service with the option for anonymous screening. | Deleted |
| EL-034 | Eligibility and Enrollment | Individual Application & Submit Update | OneGate | Display an Individual's eligibility and subsidies under all tiers of QHP benefits through an interface with the AHS/DCF Eligibility System. | Validated |
| EL-035 | Eligibility and Enrollment | Individual Exemption from Responsibility | OneGate | Provide the capability for an Individual to indicate various types of potential exemptions through the single, integrated application process. | Validated |
| EL-036 | Eligibility and Enrollment | Individual Application & Submit Update | OneGate | Process documents received in the mail, via facsimile, web portal, and/or email. | Validated |
| EL-037 | Eligibility and Enrollment | Native Americans | OneGate | Allow qualified Native Americans to switch plans on a monthly basis. | Validated |
| EL-038 | Eligibility and Enrollment | Native Americans | N/A | Provide the capability to eliminate all cost-sharing for Native Americans enrolled in any QHP through the Exchange whose household income is less that 300 percent FPL. | Validated |
| EL-039 | Eligibility and Enrollment | Native Americans | OneGate | Allow for the indication / determination of an applicant's membership in a Native American tribe, as defined by the ACA as well as Medicaid. | Met |
| EL-040 | Eligibility and Enrollment | Individual Application & Submit Update | OneGate | Provide the capability to adjust the calculation of MAGI with allowed exclusions for qualified Native Americans per the ACA regulations. | Validated |
| EL-041 | Eligibility and Enrollment | Individual Application & Submit Update | OneGate | Distribute and collect, through a range of mediums, individual, employer, and employee enrollment forms. | Validated |



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|---|---|---|---|---|---|
| EL-042 | Eligibility and Enrollment | Individual Application & Submit Update | N/A | Provide an indicator for individuals determined eligible for Medicaid and CHIP who access coverage through the Exchange | Met |
| EL-043 | Eligibility and Enrollment | Individual Eligibility Determination-Verification | OneGate | Ask knowledge-based ID questions based on data gathered from external data sources to facilitate authentication of identity. | Validated |
| EL-044 | Eligibility and Enrollment | Individual Eligibility Determination-Verification | Oracle Identity Management | The solution may request proof of identity from Individuals, Brokers, and Navigators (driver's license, passport) if a higher level of trust is required. | Validated |
| EL-045 | Eligibility and Enrollment | Individual Eligibility Determination-Verification | OneGate | Validate Individual application information for completeness of data and prompt the Individual for additional information, if applicable. | Met |
| EL-046 | Eligibility and Enrollment | Individual Eligibility Determination-Verification | OneGate | Provide the capability to gather and display Individual and household eligibility data from external sources. | Validated |
| EL-047 | Eligibility and Enrollment | Individual Application & Submit Update | Locate | Validate mailing addresses provided in applications (using an external Postal Address validation service). | Deferred |
| EL-048 | Eligibility and Enrollment | Individual Eligibility Determination-Verification | OneGate | Allow for a manual verification process when the federal hub verification service is not available through the business rules engine. | Duplicate |
| EL-049 | Eligibility and Enrollment | Individual Eligibility Determination-Verification | Siebel Public Sector CRM | Support a dispute process. | Validated |
| EL-050 | Eligibility and Enrollment | Individual Eligib | OneGate | Provide capability to manually update incarceration status based documentation provided by the Individual (e.g. release papers). | Validated |



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| EL-051 | Eligibility and Enrollment | Participation in the Exchange | OneGate | Produce an immediate on-screen notification of a positive incarceration data match, and allow the Individual of ability to provide alternate documentation or an attestation of incarceration status. | Validated |
| EL-052 | Eligibility and Enrollment | Participation in the Exchange | ~~OneGate~~ | Update individual accounts with the verification results as appropriate. | Met |
| EL-053 | Eligibility and Enrollment | Income Verification | OneGate | Provide the capability for an Individual to confirm income data from external sources. | Met |
| EL-054 | Eligibility and Enrollment | Individual Eligibility Determination-Verification | OneGate | Provide the ability to verify information needed to evaluate eligibility for VT subsidized health plans. | Validated |
| EL-055 | Eligibility and Enrollment | Individual Eligibility Determination-Verification | OneGate | Provide the ability for Individuals to submit images of documents required for eligibility verification. | Met |
| EL-056 | Eligibility and Enrollment | Individual Eligibility Determination-Verification | OneGate | Generate online or written requests to Individuals for additional documentation of annual / monthly income, allow electronic submission of documents, link to accounts, and track follow up activities. | Validated |
| EL-057 | Eligibility and Enrollment | Individual Eligibility Determination-Verification | OneGate | Allow Exchange Staff, Brokers, and Navigators to view, save, and print Individual verification documents that have been up-loaded to a case. | Met |
| EL-058 | Eligibility and Enrollment | Individual Eligibility Determination-Verification | OneGate | Provide the capability to allow designated users to confirm, notate and mark active/non-active status of verification documents and verification results. | Met |
| EL-059 | Eligibility and Enrollment | Individual Eligibility Determination-Verification | OneGate | Allow Exchange Staff, Individuals, Brokers, and Navigators to provide alternative verification through multiple methods. | Validated |



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|---|---|---|---|---|---|
| EL-060 | Eligibility and Enrollment | Individual Eligibility Determination-Verification | OneGate | Provide the ability to allow Individuals to view, confirm, dispute and submit corrections to verification results. | Met |
| EL-061 | Eligibility and Enrollment | Individual Eligibility Determination-Verification | OneGate | Support checks for Medicaid eligibility that can not be serviced real-time. Responses should be accepted later, and user shall be permitted to negotiate enrollment in a QHP while waiting for a response. | Validated |
| EL-062 | Eligibility and Enrollment | Individual Eligibility Determination-Verification | OneGate | Provide the capability to accept notifications from Medicaid/CHIP regarding loss of coverage, and should evaluate those individuals for QHP subsidized coverage. | Validated |
| EL-063 | Eligibility and Enrollment | Participation in the Exchange | OneGate | Provide individuals the ability to have a reasonable opportunity (90-day period under PPACA) to address inconsistencies reported by external entities (i.e. income, citizenship, etc.) | Validated |
| EL-064 | Eligibility and Enrollment | Individual Eligibility Determination-Verification | OneGate | Provide the capability for an Individual to indicate or attest to affiliation with recognized Native American tribe during the application process, request verification and update the individual account with verified information. | Validated |
| EL-065 | Eligibility and Enrollment | Change Management | N/A | Provide the ability to update information related to other components of eligibility not described above, including access to minimum essential coverage. | Validated |
| EL-066 | Eligibility and Enrollment | Change Management | OneGate | Reassess and determine eligibility based on the new circumstances. For every data field, the system must be configurable to force an eligibility determination/re-determination based on revised data input. | Met |
| EL-067 | Eligibility and Enrollment | Change Management | OneGate | Provide consumers the ability to view the new determination of eligibility after the change in circumstances. | Met |
| EL-068 | Eligibility and Enrollment | Change Management | OneGate | Provide users the ability to choose new health plans after the re-determination process based on the new circumstances. | Met |
| EL-069 | Eligibility and Enrollment | Case Inquiry | OneGate | Allow Exchange Staff, customers, call center staff and Navigators to search for a customer's household information and composition. | Met |
| EL-070 | Eligibility and Enrollment | Case Inquiry | OneGate | Allow Exchange Staff, customers, call center staff and Navigators to view a customer's household information and composition. | Met |



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| EL-071 | Eligibility and Enrollment | Case Inquiry | OneGate | Allow Exchange Staff, customers, call center staff and Navigators to add, update, modify and delete household composition information. | Validated |
| EL-072 | Eligibility and Enrollment | Identity Management | Oracle MDM (Customer Hub) | Provide automatic checks for duplicate household members within other cases in the system. | Validated |
| EL-073 | Eligibility and Enrollment | Identity Management | OneGate | Allow Exchange Staff, call center staff and Navigators to merge or associate different household members together. | Validated |
| EL-074 | Eligibility and Enrollment | Identity Management | OneGate | Provide the ability to split family relationships and to assign certain field information to the appropriate people. | Validated |
| EL-33 | Eligibility and Enrollment | Individual Application & Submit Update | OneGate | Allow continuance of the application process for Individuals without an SSN (e.g. newborns and undocumented Individuals). | Met |
| ELM-001 | Eligibility and Enrollment | Pre-Screening | OneGate | Provide the option for anonymous completion of MAGI eligibility related questions | Validated |
| ELM-002 | Eligibility and Enrollment | Pre-Screening | OneGate | The following MAGI related data items should be requested in the pre-screening: financial, residency, person specific (age, gender, pregnant, disability, tribal affiliation) relationships to other household members | Validated |
| ELM-003 | Eligibility and Enrollment | Individual Application & Submit Update | OneGate | Provide a more detailed / specific application to be completed for MAGI MAGI QHP eligibility (incl. APTC, CSR). | Deleted |
| ELM-004 | Eligibility and Enrollment | Individual Application & Submit Update | OneGate | As part of the application process, collect State residence information in accordance with the Federal and State regulations and necessary to establish MAGI QHP eligibility (incl. APTC, CSR). | Validated |
| ELM-005 | Eligibility and Enrollment | Individual Application & Submit Update | OneGate | As part of the application process, collect citizenship / immigration status information as necessary to establish MAGI QHP eligibility (incl. APTC, CSR). | Met |
| ELM-006 | Eligibility and Enrollment | Income Verification | OneGate | As part of the application process, collect household and income information to determine if the household is under 100% FPL. | Met |



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|---|---|---|---|---|---|
| ELM-007 | Eligibility and Enrollment | Individual Application & Submit Update | OneGate | As part of the application process, support collecting additional household information and income information as necessary to establish MAGI QHP eligibility (incl. APTC, CSR). | Met |
| ELM-008 | Eligibility and Enrollment | Change Management | OneGate | Store changed information along with the date the information was changed. | Validated |
| ELM-009 | Eligibility and Enrollment | Change Management | OneGate | Support prompting users / consumers to renew their application on an annual basis. | Validated |
| ELM-010 | Eligibility and Enrollment | General | OneGate | Allow business users, as determined by the State, to easily read / modify the eligibility determination rules with minimal IT support. | Validated |
| ELM-011 | Eligibility and Enrollment | Individual Application & Submit Update | OneGate | Provide a method to identify persons who are eligible for services. | Met |
| ELM-012 | Eligibility and Enrollment | Program Policy | CGI Solution | Be scalable and flexible enough to accommodate and adapt to changes required by State and/or Federal statute, regulation, mandate, decision, or policy. | Validated |
| ELM-013 | Eligibility and Enrollment | Individual Application & Submit Update | OneGate | Allow individuals in a household to be eligible under different categories and receive different benefits related to MAGI QHP/APTC/CSR based upon individual information. | Met |
| ELM-014 | Eligibility and Enrollment | Application Process | OneGate | Provide an [anonymous] screening tool that is compatible with the HBE and allows an applicant to answer an initial basic set of questions to quickly identify potential eligibility for MAGI QHP (incl. APTC, CSR). | Validated |
| ELM-015 | Eligibility and Enrollment | Application Process | OneGate | Provide customized local office information, through public-facing front-end (i.e. physical location of nearest local office and name, email and phone number). | Validated |
| ELM-016 | Eligibility and Enrollment | Application Process | OneGate | Provide interactive questions that can lead to appropriate next questions, to include identification of an ABD-applicant, in need for a supplemental form(s), based on responses and other existing data necessary to establish MAGI QHP eligibility (incl. APTC, CSR). . | Validated |



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|---|---|---|---|---|---|
| ELM-017 | Eligibility and Enrollment | Individual Application & Submit Update | OneGate | Provide a mechanism to define required and optional fields, including default data values as applicable, based on the MAGI QHP eligibility (incl. APTC, CSR). program rules. | Met |
| ELM-018 | Eligibility and Enrollment | Application Process | OneGate | Identify and display verifications required for the applicant based on program rules. | Validated |
| ELM-019 | Eligibility and Enrollment | Application Process | OneGate | Produce a customized listing of verification documents for an eligibility criteria required to complete eligibility determination. | Met |
| ELM-021 | Eligibility and Enrollment | Application Process | OneGate | Present the applicant with a summary view of the information entered prior to submission. | Met |
| ELM-022 | Eligibility and Enrollment | Application Process | OneGate | Allow applicants to print /save a copy of electronic copy for their records. | Validated |
| ELM-023 | Eligibility and Enrollment | Application Process | OneGate | Allow an applicant or applicant's authorized representative to review the current application before and after formal submission. | Validated |
| ELM-024 | Eligibility and Enrollment | Application Process | OneGate | Allow an applicant or applicant's representative to amend an application as long as a determination has not been made. | Validated |
| ELM-025 | Eligibility and Enrollment | Application Process | OneGate | Allow the applicant or applicant's authorized representative to save and amend the application or renewal for up to 30 days in order to gather additional information prior to submittal. | Validated |
| ELM-026 | Eligibility and Enrollment | Application Process | OneGate | Allow and record an applicant's request to withdraw an application. | Deferred |
| ELM-027 | Eligibility and Enrollment | Application Process | CGI | Collect and manage information about beneficiary population from diverse sources. | Validated |
| ELM-028 | Eligibility and Enrollment | Individual Application & Submit Update | OneGate | Provide an automated or guided application process to enable the applicant/worker to easily enter required information. | Met |
| ELM-029 | Eligibility and Enrollment | Application Process | OneGate | Provide system-generated date and time stamp for receipt of electronic applications to be used in monitoring standards of promptness by program. | Validated |
| ELM-030 | Eligibility and Enrollment | Application Process | CGI | Provide system-generated date and time stamp for registration of paper applications. | Validated |
| ELM-031 | Eligibility and Enrollment | Application Process | OneGate | Provide a mechanism to begin benefits on a date different than the application date and system-generated date. | Met |



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| ELM-032 | Eligibility and Enrollment | Application Process | OneGate | Capture and display date that a disposition was made on an application/renewal. | Validated |
| ELM-033 | Eligibility and Enrollment | Application Process | OneGate | Provide the capability for an applicant to indicate various types of potential exemptions through the single, integrated application process. | Duplicate |
| ELM-034 | Eligibility and Enrollment | Application Process | OneGate | Route applications to the appropriate staff, based on business rules. | Validated |
| ELM-035 | Eligibility and Enrollment | Application Process | | Display to the applicant discrepant information between the new application and information stored in the existing household. | Validated |
| ELM-036 | Eligibility and Enrollment | Application Process | OneGate | Allow for a manual verification process when the Federal or State hub verification service is not available. | Validated |
| ELM-037 | Eligibility and Enrollment | Application Process | OneGate | Provide a mechanism to indicate which verification documents have already been provided. | Met |
| ELM-038 | Eligibility and Enrollment | Application Process | CGI | Provide applicants the ability to submit alternative verification via multiple avenues (e.g., email, mail, phone, fax, walk- in). | Validated |
| ELM-039 | Eligibility and Enrollment | Application Process | OneGate | Provide a mechanism to manually extend verification timeframes. | Validated |
| ELM-040 | Eligibility and Enrollment | Application Process | OneGate | Provide a mechanism to track required verification timeframes. | Validated |
| ELM-041 | Eligibility and Enrollment | Application Process | OneGate | Provide a mechanism to generate a list of received and pending verifications including eligibility worker entered comments. | Met |
| ELM-042 | Eligibility and Enrollment | Application Process | OneGate | Provide the ability to allow applicants to view, confirm, dispute and submit corrections to verification results. | Validated |
| ELM-043 | Eligibility and Enrollment | Application Process | OneGate | Provide applicants the ability to address inconsistencies reported by external entities (i.e. income, citizenship, etc.) within a timeframe defined by the State. | Validated |
| ELM-044 | Eligibility and Enrollment | Application Process | OneGate | Update the applicant's record with the verification results as appropriate. | Met |
| ELM-045 | Eligibility and Enrollment | Application Process | OneGate | Assure consistency in eligibility determination processing when applicants attempt to access services through different entry points. | Met |
| ELM-046 | Eligibility and Enrollment | Application Process | OneGate | Provide the capability to determine and correct eligibility for current and prior months. | Validated |



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| ELM-047 | Eligibility and Enrollment | Application Process | OneGate | Display the eligibility results in a manner that is comprehensive and easy to understand. | Met |
| ELM-048 | Eligibility and Enrollment | Household Maintenance | OneGate | Provide the capability to create and maintain an electronic household file of all applicants and families requesting MAGI QHP/APTC/CSR from the time that they first make an entry to the system. | Met |
| ELM-049 | Eligibility and Enrollment | Household Maintenance | tbd | Auto-populate known data within the system between modules and functions within the life of the household. | Validated |
| ELM-050 | Eligibility and Enrollment | Household Maintenance | tbd | Provide a mechanism to edit and store certain automatically populated data as defined by the State. | Validated |
| ELM-051 | Eligibility and Enrollment | Household Maintenance | OneGate | Allow authorized users to search online household files using key fields such as name, SSN, ID, date of birth, etc. | Met |
| ELM-052 | Eligibility and Enrollment | Household Maintenance | OneGate | Provide a mechanism for authorized users to access beneficiary/household summary from any screen. | Validated |
| ELM-053 | Eligibility and Enrollment | Household Maintenance | OneGate | Provide the functionality to reinstate service coverage until the Administrative Appeals decision is rendered. | Validated |
| ELM-054 | Eligibility and Enrollment | Household Maintenance | OneGate | Provide the capability at an individual level to be able to rework a prior involvement that is closed even if an open involvement exists. | Validated |
| ELM-055 | Eligibility and Enrollment | Household Maintenance | OneGate | Provide a mechanism to indicate relationships between all members of a household. | Met |
| ELM-057 | Eligibility and Enrollment | Household Maintenance | CGI | Provide the capability to perform mass terminations due to changes in status as well as program changes. | Validated |
| ELM-058 | Eligibility and Enrollment | Household Maintenance | OneGate | Provide a mechanism to indicate that a beneficiary/household is under review. | Validated |
| ELM-059 | Eligibility and Enrollment | Household Maintenance | OneGate | Provide a mechanism to alert management that pending applications have exceeded specified time limits. | Validated |
| ELM-060 | Eligibility and Enrollment | Household Maintenance | OneGate | Automatically create an alert of approaching deadlines. | Validated |
| ELM-061 | Eligibility and Enrollment | Household Maintenance | OneGate | Allow applicant/beneficiaries to self-report changes in their personal information online, described by the State when changes are made. | Met |
| ELM-062 | Eligibility and Enrollment | Household Maintenance | OneGate | Provide the capability to view the new determination of eligibility after the change in information. | Met |



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| ELM-063 | Eligibility and Enrollment | Household Maintenance | OneGate | Automatically close beneficiaries/households/categories based on applicable eligibility rules resulting from changes in information and track closure reasons. | Validated |
| ELM-064 | Eligibility and Enrollment | Household Maintenance | OneGate | Provide functionality to manually close beneficiaries/households/categories based on applicable eligibility rules resulting from changes in information and track closure reasons. | Validated |
| ELM-065 | Eligibility and Enrollment | Household Maintenance | Audit Logging | Provide the capability to track and record any changes to an individual's information. | Validated |
| ELM-066 | Eligibility and Enrollment | Household Maintenance | Audit Logging | Allow authorized users to update, add persons, and relationships to an existing household and maintain a history thereof. | Met |
| ELM-067 | Eligibility and Enrollment | Household Maintenance | OneGate | Change the status of any individual in a household without terminating eligible household members. | Validated |
| ELM-068 | Eligibility and Enrollment | Household Maintenance | OneGate | Provide web-based functionality to allow the applicant to renew eligibility online. | Validated |
| ELM-069 | Eligibility and Enrollment | Household Maintenance | CGI | Allow for renewals that do not occur online. | Validated |
| ELM-070 | Eligibility and Enrollment | Household Maintenance | OneGate | Track when a renewal is due. | Validated |
| ELM-071 | Eligibility and Enrollment | Household Maintenance | OneGate + CGI noticing | Have the ability to track which renewals have been sent and which have been returned. | Validated |
| ELM-072 | Eligibility and Enrollment | Household Maintenance | OneGate + CGI noticing | Have the ability to automatically send renewal notices to beneficiaries | Validated |
| ELM-073 | Eligibility and Enrollment | Household Maintenance | OneGate + CGI noticing | Have the ability to pre-populate renewal forms with beneficiary information that is currently on file and allow the beneficiary to change or add information. | Validated |
| ELM-074 | Eligibility and Enrollment | Household Maintenance | OneGate | Renew eligibility based on Federal and State statutes and regulations as necessary to establish MAGI QHP eligibility (incl. APTC, CSR). | Validated |
| ELM-075 | Eligibility and Enrollment | Household Maintenance | OneGate | Recalculate and redetermine eligibility when a change in circumstance occurs (e.g., household composition changes, child turning 19). | Met |



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| ELM-076 | Eligibility and Enrollment | Household Maintenance | OneGate | Track and allow beneficiaries who did not return the pre-populated renewal form or the required documentation and are terminated on that basis a reconsideration period, as defined by the State, when the State would reconsider eligibility without a new application and renew eligibility if necessary information is provided. | Validated |
| ELM-077 | Eligibility and Enrollment | Household Maintenance | OneGate | Provide the capability to automate the renewal process if all information remains the same or if verified information remains within applicable limits. | Validated |
| ELM-078 | Eligibility and Enrollment | Household Maintenance | OneGate | Assure renewal forms meet the same accessibility standards as application. | Validated |
| ELM-079 | Eligibility and Enrollment | Household Maintenance | CGI | Provide the functionality to routinely (e.g., daily, weekly, or monthly as determined by the State) match available data in the State Data Hub or with other interfaces to identify recipient changes (e.g., obtain employment (via DLIR), begin receiving other TPL (via TPL vendor), deceased (via DOH vital statistics), or enter prison (via Public Safety). | Validated |
| ELM-080 | Eligibility and Enrollment | Workflow Management | OneGate | Support both task-based and household-based operations. | Met |
| ELM-081 | Eligibility and Enrollment | Workflow Management | OneGate | Provide the capability to save work in progress, exit the workflow, access work at a later point with all of the information still populated from the previous worker's actions so as previous work will not need to be repeated and the worker can enter the workflow where they left off. | Met |
| ELM-082 | Eligibility and Enrollment | Workflow Management | OneGate | Track, monitor, and display work done/ in queue to supervisors. | Validated |
| ELM-083 | Eligibility and Enrollment | Financial Assistance | OneGate | Flag any household record Change of Circumstance so that the eligibility workers can determine the derivation of the Change of Circumstance. | Met |
| ELM-084 | Eligibility and Enrollment | Financial Assistance | OneGate | Flag household record Change of Circumstance and allow DHS to designate changes that will be automatically accepted, pended for review, maintained as notes, rejected or other action. | Validated |
| ELM-085 | Eligibility and Enrollment | Interfaces | CGI | Alert eligibility workers or a processing queue when beneficiary information is updated through an automated interface. | Validated |



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|---|---|---|---|---|---|
| ELM-086 | Eligibility and Enrollment | Interfaces | CGI/Oracle | Provide a Business Rules Engine to access two-way, real-time interfaces with existing State databases to verify application data (e.g., State wage data, incarceration data) as required. | Validated |
| ELM-087 | Eligibility and Enrollment | Interfaces | CGI | Provide the ability to leverage the federal approach to verification from federal agencies such as the Internal Revenue Service, Department of Health and Human Services, and Department of Homeland Security to eliminate the independent establishment of those interfaces and connections at the State level. | Validated |
| ELM-20 | Eligibility and Enrollment | Application Process | OneGate | Allow the worker/applicant to upload and attach source documents to support eligibility determination. | Met |
| ELM-56 | Eligibility and Enrollment | Household Maintenance | OneGate | Provide a mechanism to automatically create the inverse family relationships (e.g., parent – child, child – parent, etc.). | Validated |
| EN-001 | Eligibility and Enrollment | Plan Selection | OneGate | Prepare an enrollment questionnaire to gather individual preferences and help refine choices of plan to be displayed. | Validated |
| EN-002 | Eligibility and Enrollment | Plan Selection | OneGate | Store enrollment questionnaire responses and display plan choices based on questionnaire / filtering criteria. | Met |
| EN-003 | Eligibility and Enrollment | Plan Selection | OneGate | Based on issuer and plan information gathered, display plan cost and availability. | Met |
| EN-004 | Eligibility and Enrollment | Plan Selection | OneGate | As a default, only display health plans that have been certified by the exchange, are open to additional enrollment, and are available in the individual's geographic area. | Met |
| EN-005 | Eligibility and Enrollment | Plan Selection | OneGate | Display actual plan cost based on applicable rating factors (individuals covered, age, geography, etc.) provided by the individual during the application process. | Met |
| EN-006 | Eligibility and Enrollment | Plan Selection | OneGate | If applicable, display an adjusted plan cost based on reduced cost sharing or tax credit advance eligibility. | Met |
| EN-007 | Eligibility and Enrollment | Plan Selection | OneGate | Provide an individual the capability to apply the Tax Credit Advance (if eligible) to his / her monthly premium payment or decline the advance, allowing individuals the ability to alternatively claim tax credits at time of annual income tax filing. | Duplicate |
| EN-009 | Eligibility and Enrollment | Plan Selection | OneGate | Generate on-screen notification to individuals who select at Tax Credit Advance of the possibility of tax penalties / liabilities at time of tax filing should their annual income increase. | Validated |
| EN-010 | Eligibility and Enrollment | Plan Selection | OneGate | Provide capability to display a detailed comparison of available health plans based on individual preferences. | Met |



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|---|---|---|---|---|---|
| EN-011 | Eligibility and Enrollment | Plan Selection | OneGate | Provide capability for individuals to adjust individual preferences and update display / comparison of available qualified health plans. This capability includes the ability to further refine or constrain filtering criteria to either display a greater or lesser number of plan choices. | Met |
| EN-012 | Eligibility and Enrollment | Plan Selection | OneGate | Provide hyperlinks to Issuer/Plan sites for individuals to obtain further information from Issuers | Met |
| EN-013 | Eligibility and Enrollment | Plan Selection | OneGate | Provide capability for an individual to select a QHP and initiate the enrollment process. | Validated |
| EN-014 | Eligibility and Enrollment | Plan Selection | OneGate | Prevent individuals that have a current QHP selection pending from adding a new QHP or changing their pending selection. | Validated |
| EN-015 | Eligibility and Enrollment | Plan Selection | OneGate | Once a plan is selected, direct an individual to issuer-specific specific instructions on payment remittance for monthly premiums. | Validated |
| EN-015 | Eligibility and Enrollment | Plan Selection | OneGate | Once a plan is selected, direct an individual to issuer-specific specific instructions on payment remittance for monthly premiums. | Validated |
| EN-016 | Eligibility and Enrollment | Plan Selection | OneGate | Update an individuals account to reflect plan selection and the effective plan-year. | Met |
| EN-017 | Eligibility and Enrollment | Plan Selection | OneGate/CGI | After plan selection, initiate the plan enrollment process / electronic transaction to applicable issuers. | Validated |
| EN-018 | Eligibility and Enrollment | Plan Selection | OneGate | If individuals directly enroll in health plans through the issuer, update an individual's account information based on enrollment information provided by the issuer. | Deleted |
| EN-019 | Eligibility and Enrollment | Enrollment | OneGate | Prepare an electronic, real-time transmission of information necessary in order for the qualified health plan issuer to provide a welcome package and identification card to the individual and to implement advance premium tax credits and cost-sharing reductions, as applicable. | Validated |
| EN-020 | Eligibility and Enrollment | Enrollment | OneGate | Record and store current plan enrollment information for all individuals registered on the Exchange. | Met |
| EN-021 | Eligibility and Enrollment | Enrollment | OneGate/CGI | Process in real-time, the electronic confirmation / acknowledgement of receipt of enrollment transaction from issuer. | Validated |



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| EN-022 | Eligibility and Enrollment | Enrollment | Healthation | Prepare an electronic notice to CMS with a minimum dataset of information regarding an individual's enrollment in a qualified health plan through the Exchange, following the receipt of acknowledgement from the issuer. | Validated |
| EN-023 | Eligibility and Enrollment | Enrollment | Healthation | Prepare and electronic, real-time electronic transmission to the issuer of an individual's selected qualified health plan regarding changes to the individual's information, including to his or her levels of advance premium tax credits or cost-sharing reductions, or regarding a decision by an individual to renew his or her enrollment in the qualified health plan. | Validated |
| EN-025 | Eligibility and Enrollment | Enrollment | OneGate | Provide capability to receive electronic notifications from issuers regarding disenrollment and initiate disenrollment process | Validated |
| EN-025 | Eligibility and Enrollment | Enrollment | OneGate | Provide capability to receive electronic notifications from issuers regarding disenrollment and initiate disenrollment process | Validated |
| EN-026 | Eligibility and Enrollment | Enrollment | OneGate | Provide the capability for an individual to request a voluntary disenrollment from a QHP. | Validated |
| EN-027 | Eligibility and Enrollment | Enrollment | OneGate | If conditions for a voluntary disenrollment (e.g. issuer notifies Exchange of failure to pay QHP premiums beyond the grace period, Issuer or Exchange reports a change in eligibility, etc.), initiate the disenrollment process. | Validated |
| EN-028 | Eligibility and Enrollment | Enrollment | OneGate | If an individual initiates a voluntary disenrollment through the Exchange and not directly with the Issuer, produce an electronic notification to the Issuer to disenroll an individual. | Validated |
| EN-028 | Eligibility and Enrollment | Enrollment | OneGate | If an individual initiates a voluntary disenrollment through the Exchange and not directly with the Issuer, produce an electronic notification to the Issuer to disenroll an individual. | Validated |
| EN-029 | Eligibility and Enrollment | Enrollment | OneGate | Update user accounts based on disenrollment notification from issuers or disenrollments initiated by the Exchange. | Validated |
| EN-030 | Eligibility and Enrollment | Enrollment | OneGate | Prepare a notice to CMS with a minimum dataset of information regarding an individual's disenrollment from a qualified health plan through the Exchange. | Validated |
| EN-030 | Eligibility and Enrollment | Enrollment | OneGate | Prepare a notice to CMS with a minimum dataset of information regarding an individual's disenrollment from a qualified health plan through the Exchange. | Validated |



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| EN-031 | Eligibility and Enrollment | Enrollment | OneGate | When a plan is decertified, initiate the health plan enrollment process for affected individuals (based on special enrollment period rules). | Validated |
| EN-032 | Eligibility and Enrollment | Enrollment | OneGate | After an individual has been determined eligible to select a QHP, determine the next available period for open enrollment. The open enrollment period should be tracked separately from timeframes for eligibility renewals for Medicaid/CHIP/BHP/Tax Credits. | Validated |
| EN-033 | Eligibility and Enrollment | Enrollment | OneGate | Prepare and provide communication to individuals about a mid-year plan decertification and notify need for plan selection / enrollment. | Duplicate |
| EN-035 | Eligibility and Enrollment | Enrollment | OneGate | Prepare on-screen notification to individuals regarding eligibility for enrollment periods. | Validated |
| EN-036 | Eligibility and Enrollment | Periodic Reporting | Oracle BI | Periodically and on an ad hoc basis provide electronic report to issuers about individual QHP enrollment data | Validated |
| EN-037 | Eligibility and Enrollment | Periodic Reporting | Premium Processor / One Gate | Automatically identify and process issuer discrepancies and payment information | Validated |
| EN-038 | Eligibility and Enrollment | Periodic Reporting | Oracle BI | Generate report of periodic issuer reconciliation to CMS | Validated |
| EN-039 | Eligibility and Enrollment | Periodic Reporting | OneGate | Generate annual report to individual about QHP enrollment | Deferred |
| EN-040 | Eligibility and Enrollment | Periodic Reporting | Oracle BI | Generate annual report to IRS about QHP enrollment | Deferred |
| MO-023 | Enrollment | Medicaid Plan Enrollment | OneGate | Allow for real time and paper enrollment into Medicaid health plans for all eligibles (i.e., federal and state medical assistance programs such as Medicaid, CHIP) | Validated |
| MO-025 | Enrollment | Medicaid Plan Enrollment | OneGate | Provide a mechanism to determine plan assignment, defined by the DHS, if an individual fails to select a plan within the required timeframe. | Validated |
| MO-026 | Enrollment | Medicaid Plan Enrollment | OneGate | Allow for retroactive plan enrollment based on criteria established by DHS. | Validated |
| MO-027 | Enrollment | Medicaid Plan Enrollment | OneGate | Transmit plan selection electronically based on DHS defined criteria. | Validated |



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| MO-24 | Medicaid Plan Enrollment | Plan Selection | OneGate | Allow Medicaid-eligible individuals to view available plans in the plan selection module with the same level of functionality offered to individuals shopping in the commercial market | Met |
| WP-026 | Web Portal | Pre-Screening/ Screening | OneGate | Provide calculator functionality for individuals to estimate their premiums including potential premium tax credit subsidies and cost sharing reductions | Duplicate |
| WP-033 | Web Portal | Enrollment | OneGate | Enable individual users to enroll in a plan which they have selected | Duplicate |
| WP-035 | Web Portal | Financial Management | OneGate | Allow users to set up payment options for their selected plan(s) | Duplicate |
| WP-036 | Web Portal | Financial Management | OneGate | Allow users to make recurring and scheduled electronic premium payments through the Exchange portal | Duplicate |
| SH-001 | Small Business | Prepare Employer Application | OneGate | Provide field level help for each preliminary questionnaire and application data element that includes description and required data format. | Met |
| SH-002 | Small Business | Prepare Employer Application | OneGate | Provide capability for employers to access in-depth online help during the preliminary questionnaire process; provide the tools to educate Employers on the services provided within the Exchange. | Validated |
| SH-003 | Small Business | Prepare Employer Application | Siebel Public Sector CRM | Provide capability for employers to request further assistance through Chat Support (online assistance from a customer service representative) during the preliminary questionnaire process. | Deferred |
| SH-004 | Small Business | Prepare Employer Application | OneGate | Provide multiple methods for an employer to build an employee roster through the application process (e.g. manual entry, file upload, etc.) | Met |
| SH-005 | Small Business | Plan Selection/ Employer Application | OneGate | Generate a request to initiate the employer selection of qualified health plan during the application process. | Met |
| SH-006 | Small Business | Plan Selection | OneGate | Provide the capability to calculate an estimate as to whether a premium might exceed the affordability scale for a given employee income, so that the employer may know the likelihood of receiving a tax penalty for offering unaffordable insurance. | Met |



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| SH-007 | Small Business | Plan Selection | OneGate | Based on carrier and plan information gathered, display plan cost and availability based on initial questionnaire completed by the employer. | Validated |
| SH-008 | Small Business | Plan Selection | OneGate | As a default, only display health plans that have been certified by the Exchange, are open to additional enrollment, and are available in the employer's geographic area. | Deleted |
| SH-009 | Small Business | Plan Selection | OneGate | Display actual plan cost based on applicable rating factors (consumers covered, age, geography, etc.) provided by the employer during the application process. | Deleted |
| SH-010 | Small Business | Plan Selection | OneGate | Provide capability to display a detailed comparison of available health plans based on employer preferences, including product categories. | Deleted |
| SH-011 | Small Business | Plan Selection | OneGate | Provide capability to display a detailed and cost comparison of all available health plans based on information about employees and employee dependents listed in the employee roster. | Validated |
| SH-012 | Small Business | Plan Selection | OneGate | Provide capability for employers to adjust employer preferences and update display / comparison of available qualified health plans. This capability includes the ability to further refine or constrain filtering criteria to either display a greater or lesser number of plan choices, and the ability to view all available plans based on a specified tier. | Deferred |
| SH-013 | Small Business | Plan Selection | OneGate | Provide capability for an employer to select QHP(s), or a tier, and initiate the participation process. | Deleted |
| SH-014 | Small Business | Plan Selection | OneGate | Provide functionality to have a small business tax calculator available to small employers. | Met |
| SH-015 | Small Business | Plan Selection | OneGate | Once a plan, plans or a tier is selected, direct an employer to instructions on payment remittance for monthly premiums and coordinating the benefit election process with employees. | Validated |
| SH-016 | Small Business | Plan Selection | OneGate | If applicable, display an adjusted plan final cost based on an estimated small business tax credit eligibility as determined by federal data hub interface, enumerating the costs prior to the small business tax credit, the projected savings for the employer from the small business tax credit and the final costs to the employer expected with the small business tax credit. | Met |



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| SH-017 | Small Business | Plan Selection | OneGate | For informational purposes only, provide ability to generate on-screen notification to employers who select a Small Business Tax Credit of the possibility of tax penalties / liabilities at time of tax filing should their business size or income change and display language pertaining to legal implications of eligibility determination to the employer. | Validated |
| SH-018 | Small Business | Plan Selection | OneGate | Provide an online calculator for an employer to estimate potential eligibility as well as potential tax credit under the 4 tiers of qualified health plan benefits. | Met |
| SH-019 | Small Business | Employer/Employee Application | OneGate | Provide capability to accept paper documents for SHOP, such as employer / employee applications and verifications. | Validated |
| SH-020 | Small Business | Employer Application | OneGate | Allow authorized assistors to complete employer applications on behalf of the employer (i.e. an administration or finance department/personnel, etc.) | Validated |
| SH-021 | Small Business | Employer Application | OneGate | Provide a single, online employer application for Small Business | Met |
| SH-022 | Small Business | Employer Application | OneGate | During the Application Process, prompt the Employer to enter the exact business name associated with the EIN. | Validated |
| SH-023 | Small Business | Employer Application | OneGate | Provide the capability to differentiate / track full-time employees versus part-time/hourly employees in the employee roster. | Met |
| SH-024 | Small Business | Employer Application | OneGate | Validate field-level information for correct data format and completeness | Met |
| SH-025 | Small Business | Employer Application | Loqate | Conduct validation of mailing addresses provided in applications (using external Postal Address validation service) | Deferred |
| SH-026 | Small Business | Employer Application | OneGate | For employers who do not have an EIN, allow the application process to proceed (e.g. businesses in the process of obtaining an EIN, etc.) Per the 30-day validation process, allow for the suspension of eligibility if EIN remains un-verified. | Validated |
| SH-027 | Small Business | Employer/Employee Application | OneGate | Within the employer and employee application, the Exchange shall validate field-level information for format and completeness | Met |
| SH-028 | Small Business | Employer Application | OneGate | Provide capability to utilize / create a single client identifier for the Exchange and use that identifier to locate the employer at the point of application / account creation / renewals, etc., as applicable. | Met |



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| SH-029 | Small Business | Employer Application | OneGate | Prior to the creation of a new employer account, the Exchange shall determine if an existing user account is present based on matching criteria provided in the application (e.g. EIN, name) | Validated |
| SH-030 | Small Business | Employer Application | OneGate | Provide capability to validate employee SSNs and TINs submitted through the employer application (employee roster). | Validated |
| SH-031 | Small Business | Employer Application | Oracle Identity Manager | Create user name and password for each employee listed on employee roster. | Deleted |
| SH-032 | Small Business | Employer Application | OneGate | Allow employer-authorized broker/assister to submit all or select data for Employer Application | Validated |
| SH-033 | Small Business | Employer Application | OneGate | Capture broker/assister of record in the employer and account information | Validated |
| SH-034 | Small Business | Employer/Employee Application | OneGate | At the point when an employer builds an initial employee roster, the SHOP Exchange will not need to establish unique individual identifiers utilizing the eligibility and enrollment database. However, when employees utilize the exchange after notification from their employers, the Exchange should check for an existing unique identifier / account. If one does not exist, the Exchange will facilitate the creation of a new unique identifier. | Validated |
| SH-035 | Small Business | Employer/Employee Application | OneGate | During the application process, user accounts shall be created that include the following:<br>- User unique identifier<br>- User demographic information<br>- Application status<br>- Participation status<br>- Existing program eligibility (Small Business Tax Credit (For Profit or Tax Exempt), SHOP Eligibility) | Validated |
| SH-036 | Small Business | Employer/Employee Application | OneGate | Support the creation of a user account for both employers and employees that defines a user-defined, user name and password. | Met |
| SH-037 | Small Business | Plan Selection | OneGate | Update an employer's account to reflect plan selection and the effective projected plan-year. | Met |
| SH-038 | Small Business | Communicate Options to Employees | OneGate | Provide the capability for the employer to generate a packet of critical information to distribute to the employee. | Met |



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|---|---|---|---|---|---|
| SH-039 | Small Business | Communicate Options to Employees | OneGate | Upon submittal of initial Employer Application, provide email or written notification to employees (as identified on the employee roster) to elect for or opt-out of employer sponsored coverage. Notification should also provide instructions and information to the employee about the open enrollment period and SHOP website access. | Met |
| SH-040 | Small Business | Verify Employer Data on Eligibility Application | OneGate | Provide capability to generate a request to the VT DOL to verify an employer's size. | Deferred |
| SH-041 | Small Business | Verify Employer Data on Eligibility Application | OneGate | Provide the capability to initiate a manual verification process when additional verification of employer size is required. (e.g. using EIN, HBI, actual payroll, Master Business License Application, income tax documents, etc.) | Deferred |
| SH-042 | Small Business | Verify Employer Data on Eligibility Application | OneGate | Display the result of the verification provided by Department of Labor; provide means for an employer to dispute, call into question or appeal the validity of data from authoritative sources | Validated |
| SH-043 | Small Business | Verify Employer Data on Eligibility Application | OneGate | Provide capability to electronically store documents submitted for verification of employer size, business address, coverage, and number of full-time employees. | Deferred |
| SH-044 | Small Business | Verify Employer Data on Eligibility Application | OneGate | Track status of employer size verification based on the following:<br>- Verified<br>- Not verified<br>- Pending Review | Deferred |



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|---|---|---|---|---|---|
| SH-045 | Small Business | Verify Employer Data on Eligibility Application | OneGate | Provide capability to produce a mailed, written notice to the employer to provide additional verifications (notices are sent out nightly in batch); the automated written notice shall include:<br>- Employer name<br>- Address<br>- Unique identifier, potentially<br>- Employer EIN<br>- Information requested<br>- Due date based on date of initial application | Validated |
| SH-046 | Small Business | Verify Employer Data on Eligibility Application | OneGate | When additional verification is required, provide on-screen notification to employer to supply additional verifications through the Exchange. | Deferred |
| SH-047 | Small Business | Verify Employer Data on Eligibility Application | OneGate | Update user / employer account status based on updated results for employer size, business address, coverage and number of full time employees | Validated |
| SH-048 | Small Business | Verify Employer Data on Eligibility Application | OneGate | Provide capability to generate a request to the Information Source To Be Determined (TBD) to verify Business Address or Worksite. | Deferred |
| SH-049 | Small Business | Verify Employer Data on Eligibility Application | OneGate | Provide the capability to initiate a manual verification process when additional verification of Business Address or Worksite is required. | Deferred |
| SH-050 | Small Business | Verify Employer Data on Eligibility Application | OneGate | Display the result of the verification provided by Information Source TBD; provide means for an employer to dispute, call into question or appeal the validity of data from authoritative sources | Validated |



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|---|---|---|---|---|---|
| SH-051 | Small Business | Verify Employer Data on Eligibility Application | OneGate | Provide capability to electronically store documents submitted for Business Address or Worksite verification. | Validated |
| SH-052 | Small Business | Verify Employer Data on Eligibility Application | OneGate | Track status of verification separately for employer size, business address, coverage and number of full time employees based on the following:<br>- Verified<br>- Not verified<br>- Pending Review | Validated |
| SH-053 | Small Business | Verify Employer Data on Eligibility Application | OneGate | Produce a mailed, written notice to the employer to provide additional verifications (notices are sent out nightly in batch); the automated written notice shall include:<br>- Employer name<br>- Address<br>- Unique identifier, potentially<br>- Employer EIN<br>- Information requested<br>- Due date based on date of initial application | Duplicate |
| SH-054 | Small Business | Verify Employer Data on Eligibility Application | OneGate | When additional verification is required, provide on-screen notification to employer to supply additional verifications through the Exchange. | Validated |
| SH-055 | Small Business | Verify Employer Data on Eligibility Application | OneGate | Provide capability to generate a request to the Information Source To Be Determined (TBD) to verify Coverage Offered to all Full Time Employed Employees, if applicable. | Validated |
| SH-056 | Small Business | Verify Employer Data on Eligibility Application | OneGate | Provide the capability to initiate a manual verification process when additional verification of Coverage Offered to all Full Time Employed Employees is required. | Deferred |



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|---|---|---|---|---|---|
| SH-057 | Small Business | Determine Employer Eligibility | OneGate | Provide capability to allow employer participation upon initial application, but to terminate participation if original eligibility information is in question and is not substantiated within thirty days. | Validated |
| SH-058 | Small Business | Determine Employer Eligibility | OneGate | Generate a request to determine whether an employer meets size, location and employee coverage requirements to utilize the Small Business Exchange | Met |
| SH-059 | Small Business | Determine Employer Eligibility | OneGate | Conduct an eligibility determination as to whether an employer meets size, location and employee coverage requirements to utilize the Small Business Exchange | Met |
| SH-060 | Small Business | Determine Employer Eligibility | OneGate | Based on size, location and employee coverage, determine whether an employer is eligible to select and participate in a QHP through the Small Business Exchange. | Deleted |
| SH-061 | Small Business | Determine Employer Eligibility | OneGate | Generate written and on-screen notification of the result of an employer's eligibility determination | Validated |
| SH-062 | Small Business | Plan Selection | OneGate | Allow the Exchange to set different start dates and waiting periods for different QHPs and employers | Validated |
| SH-063 | Small Business | Plan Selection | OneGate | Prevent employers that have current QHP selection(s) pending from adding new QHP(s) or changing their pending selection. | Met |
| SH-064 | Small Business | Plan Selection / Employee Enrollment | OneGate | After plan selection by the employees and the employer has submitted payment, initiate the plan enrollment process / transaction to applicable carriers. | Validated |
| SH-065 | Small Business | Employer Contribution | OneGate | Provide the capability to determine participation rates of an employer's employees. Provide the capability to share this information with issuers. | Met |
| SH-066 | Small Business | Employer Contribution | OneGate | Once plan costs are finalized along with the Employee Census, provide onscreen and written notification to the employer, with summary and detailed cost information. | Validated |
| SH-067 | Small Business | Employer Contribution | OneGate | Following the enrollment of an employer's employees selecting plan(s) for themselves and any dependents, the employer shall have the capability to view and confirm the costs imparted upon the employer. | Validated |



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| SH-068 | Small Business | Employer Contribution | OneGate | When plan costs to the employer are finalized, the Small Business Exchange shall provide the flexibility for the Employer to review and compare employer choice models. | Met |
| SH-069 | Small Business | Employer Contribution | OneGate | Allow configuration for setting up different types of employer contributions such as percentage of the cost, a dollar value, metal levels, or other options | Met |
| SH-070 | Small Business | Employer Contribution | OneGate | Provide decision support tools, including an online calculator that supports 'what if' scenarios | Validated |
| SH-071 | Small Business | Employer Contribution | OneGate | Recognize future coverage, and manage the effective date based on future coverage information | Validated |
| SH-072 | Small Business | Employer Contribution | OneGate | Allow employer contribution to be based on multiple employee choice models, including choice within a tier, choice of carrier or entire exchange, or full employee choice | Validated |
| SH-073 | Small Business | Employer Contribution | OneGate | Allow employers to provide a contribution for employees to select a plan on the Individual Exchange | Deleted |
| SH-074 | Small Business | Employer Contribution | OneGate | Allow employers to use wage information to compare coverage options to alternatives available to their employees in the Individual Exchange | Validated |
| SH-075 | Small Business | Plan Selection / Employee Enrollment | OneGate | Upon acceptance of final offer from carrier to employer and collection of 1st month's premium payment, generate enrollment transaction to a carrier. | Validated |
| SH-076 | Small Business | Employer / Employee Termination | OneGate | Provide capability to provide termination notices in multiple forms, including in email and paper form. | Validated |
| SH-077 | Small Business | Employer / Employee Termination | OneGate | Allow SHOP Employers to identify/manage the employees within the Exchange | Validated |
| SH-078 | Small Business | Employer Termination | OneGate | Provide capability to provide notifications (i.e. termination notice, billing notices) as imaged documents during the employer's activities and for the employer to be able to view at a later date. | Validated |



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|---|---|---|---|---|---|
| SH-079 | Small Business | Employer Termination | OneGate | Provide capability to administer COBRA/VIPER, supporting these enrollments and disenrollments. | Validated |
| SH-080 | Small Business | Employer Termination | OneGate | Provide the capability for an employer to request a voluntary termination from QHP(s) at any time. | Validated |
| SH-081 | Small Business | Employer / Employee Termination | OneGate | If an employer initiates a voluntary termination through the Exchange, produce an electronic notification to the employer's employees to inform them of the employer termination. The notice should contain information relating an appeals process and other protections as defined by the Exchange. | Validated |
| SH-082 | Small Business | Employer Termination | OneGate | If an employer initiates a voluntary termination, produce an electronic notification to the Issuer to terminate the employer. | Validated |
| SH-083 | Small Business | Employer Termination | OneGate | If conditions for a voluntary termination, initiate the employer termination process. | Validated |
| SH-084 | Small Business | Employer Termination | OneGate | Provide the capability to image and store documents sent to the employer regarding the employer's termination. | Validated |
| SH-085 | Small Business | Employer / Employee Termination | OneGate | Update user accounts based on termination notification from issuers or terminations initiated by the Exchange. | Validated |
| SH-086 | Small Business | Employer Termination | OneGate | Prepare a notice to CMS with a minimum dataset of information regarding an employer's voluntary termination from a qualified health plan through the Exchange. This information may be used for small business tax credits, as well as for individual mandates, etc., as applicable. | Validated |
| SH-087 | Small Business | Employer Termination | OneGate | Provide capability to receive electronic notifications from issuers regarding involuntary terminations and initiate termination process. | Validated |
| SH-088 | Small Business | Employer Termination | OneGate | If an employer has an involuntary termination through the Exchange, produce an electronic notification to the employer to inform the employer of the employer termination. | Validated |
| SH-089 | Small Business | Employer Termination | 3rd Party Premium Processor | Provide capability to produce two different notifications to employees during a involuntary employer termination, regarding the potential or actual termination of an employer. | Deleted |
| SH-090 | Small Business | Employer Termination | OneGate | If conditions for an involuntary termination are present, initiate the termination process. | Validated |



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|---|---|---|---|---|---|
| SH-091 | Small Business | Employer Termination | 3rd Party Premium Processor | If an employer has an involuntary termination through the Exchange, prepare communication to the Issuer to terminate the employer. | Validated |
| SH-092 | Small Business | Employer Termination | OneGate | Update user accounts based on termination notification from issuers or terminations initiated by the Exchange. | Validated |
| SH-093 | Small Business | Employer Termination | OneGate | Prepare a notice to CMS with a minimum dataset of information regarding an employer's involuntary termination from a qualified health plan through the Exchange. This information may be used for small business tax credits, as well as for individual mandates, etc., as applicable. | Validated |
| SH-094 | Small Business | Employer Termination | OneGate | Notify QHPs when an employer terminates coverage and ensure coverage is discontinued | Validated |
| SH-095 | Small Business | Employer Termination | OneGate | Notify employees when an employer terminates coverage and ensure coverage is discontinued. Employees must be given a 30 day notice of termination. | Validated |
| SH-096 | Small Business | Renewal | OneGate | Provide capability for employers to submit changes to key eligibility factors for the purpose of annual eligibility / participation renewal. Supported methods of reporting changes include written forms and web-based responses through the Exchange. | Deferred |
| SH-097 | Small Business | Renewal | OneGate | Process employer responses to renew eligibility and initiate eligibility determination process if necessary. | Deferred |
| SH-098 | Small Business | Renewal | OneGate | Provide the capability to calculate a year-to-date average for premiums paid and monthly income for display to the employer at time of renewal. | Deferred |
| SH-099 | Small Business | Employer Renewal | OneGate | Based on the availability of QHP(s), determine availability of an employer's current plan for the purposes of participation renewal. | Validated |
| SH-100 | Small Business | Employer Renewal | OneGate | If the employer's current plan(s) are no longer available, provide capability to automatically suggest employer participation for a default health plan(s) for a geographic area. | Deferred |
| SH-101 | Small Business | Update Employer Eligibility Application | OneGate | Provide capability for employers to submit changes to SHOP plan participation (selected plan(s), selected tier (optional), covered employers, etc.). Supported methods of enrollment changes include written forms and web-based responses through the Exchange. | Validated |



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|---|---|---|---|---|---|
| SH-102 | Small Business | Renewal, Employee Enrollment | OneGate | Based on an employer's responses to enrollment renewal, assess responses for need to initiate enrollment into a new QHP or additional employees into an existing QHP. | Validated |
| SH-103 | Small Business | Renewal, Employee Enrollment | OneGate | Based on an employer's responses to enrollment renewal, process enrollment selections if possible. | Deleted |
| SH-104 | Small Business | Renewal, Employee Enrollment | OneGate | Process notification notifying employer of coverage for employees. Also, communicate any next steps required by the employer. | Validated |
| SH-105 | Small Business | Employer Renewal | OneGate | Process employer renewal in a method very similar to the initial employer application, allowing for the submission of an updated employee roster, processing plan selection options based on preferences, and submitting notifications to the employer. | Validated |
| SH-106 | Small Business | Update Employer Eligibility Application | OneGate | Based on employer status, determine eligibility for SHOP participation renewal (e.g. annual renewal). | Validated |
| SH-107 | Small Business | Update Employer Eligibility Application | OneGate | Produce written notification / request for employers to verify key eligibility factors (continue to has a current EIN, etc.) for the purposes of annual eligibility / participation renewal and report changes if necessary. | Validated |
| SH-108 | Small Business | Employer Renewal | OneGate | Produce a notice of annual open enrollment. | Validated |
| SH-109 | Small Business | Employer Renewal | OneGate | Present opportunity for employer to log-in to initiate their renewal. | Validated |
| SH-110 | Small Business | Appeal Small Business Eligibility Decision | OneGate | In all notices produced by the Exchange regarding eligibility determination, notify employers to their rights and responsibilities (including a right to appeal eligibility decisions). | Met |
| SH-111 | Small Business | Appeal Small Business Eligibility Decision | Siebel Public Sector CRM | Provide the capability to capture information and details of a Employer complaint. | Validated |



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|---|---|---|---|---|---|
| SH-112 | Small Business | Appeal Small Business Eligibility Decision | OneGate | Allow employers to review record of participation in the Small Business Exchange. | Met |
| SH-114 | Small Business | Appeal Small Business Eligibility Decision | Siebel Public Sector CRM | Provide the capability for an employer to request an appeal to the employer eligibility decision. | Validated |
| SH-115 | Small Business | Appeal Small Business Eligibility Decision | Siebel Public Sector CRM | Provide the capability to differentiate between appeals and complaints; default requests to complaints when received by employers unless specifically indicated as an appeal. | Duplicate |
| SH-116 | Small Business | Appeal Small Business Eligibility Decision | Siebel Public Sector CRM | Provide the capability to capture, track, and disposition appeals in the Exchange (including status, assignments, and relevant case notes). | Validated |
| SH-117 | Small Business | Appeal Small Business Eligibility Decision | Siebel Public Sector CRM | Provide the capability to refer or route appeal requests to entities outside of the Exchange such as an Independent Review Organization or Issuers. | Validated |
| SH-118 | Small Business | Appeal Small Business Eligibility Decision | Siebel Public Sector CRM | Provide capability for an employer to view key employer account information (includes employer details as well as key eligibility factors used to determine eligibility). | Met |
| SH-119 | Small Business | Appeal Small Business Eligibility Decision | Siebel Public Sector CRM | Provide the capability to record the detailed results and supporting documentation that result from or support an appeals decision. | Validated |
| SH-120 | Small Business | Appeal Small Business Eligibility Decision | OneGate | Generate a formal written notice informing an employer of the details of an appeal decision. | Duplicate |
| SH-123 | Small Business | Renew / Redetermine Employer Participation | OneGate | Provide capability for employers to submit changes to employee roster (add / remove employees) in between redeterminations / renewals. | Validated |



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| Ref Code | Category | Sub Category | Application or Module | Requirement Description "The system shall..." | Current Disposition |
|---|---|---|---|---|---|
| SH-124 | Small Business | Change Reporting | OneGate | Provide the capability for employers to submit changes to the employee rosters, using multiple methods (i.e. submission of files, completion of data fields, etc.) | Validated |
| SH-125 | Small Business | Renew / Redetermine Employer Participation | OneGate | Upon reporting changes in offers of coverage to all Full Time Employees, Employers must self-attest to continue participation in Small Business. | Validated |
| SH-127 | Small Business | Change Reporting/Periodic Reporting | OneGate | Provide capability for employers to check the status of employee QHP enrollment through the web portal. | Validated |
| SH-129 | Small Business | Change Reporting/Periodic Reporting | OneGate | Provide the capability to recalculate the employer's total cost based on reported changes to the employee roster. | Validated |
| SH-130 | Small Business | Update Employee Application | OneGate | Provide the capability for employers to submit changes to the employer contact information. | Validated |
| SH-132 | Small Business | Update Employee Application | OneGate | Prepare and send communication to the employer regarding changes to the Employer contact information. | Validated |
| SH-133 | Small Business | Renew / Redetermine Employer Participation | OneGate | Initiate the termination process if the employer is to be found no longer eligible for the Exchange. | Validated |
| SH-134 | Small Business | Renew / Redetermine Employer Participation | OneGate | Provide the capability for employers to submit changes about the employer's principal business address or primary worksite location. | Validated |
| SH-135 | Small Business | Renew / Redetermine Employer Participation | OneGate | Provide the ability to capture a reported change in the employer's principal business location and satellite offices. | Validated |



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| Ref Code | Category | Sub Category | Application or Module | Requirement Description "The system shall..." | Current Disposition |
|---|---|---|---|---|---|
| SH-138 | Small Business | Renew / Redetermine Employer Participation | OneGate | Provide the capability to determine employer eligibility based on the employer's principal business location and satellite offices. | Validated |
| SH-139 | Small Business | Renew / Redetermine Employer Participation | OneGate | Provide the capability to re-evaluate an employer's eligibility for Small Business when a change is made to the employer's work location or satellite offices. | Validated |
| SH-141 | Small Business | Renew/Redetermine Employer Participation | OneGate | Brokers / Employer Agents shall have the ability to enter information and be provided services in a manner identical or very similar to that of the employer's. | Validated |
| SH-142 | Small Business | Prepare Employee Application | OneGate | Provide the capability to identify Employers (or Employer's representatives like Human Resources, Administrative staff, etc.) if the Employers or Representatives are completing applications on behalf of an employee. Also, provide the capability for employers to update election status on behalf of their employees (i.e. log or complete the waiver process) while requiring employee approval/recognition. | Validated |
| SH-143 | Small Business | Prepare Employee Application | OneGate | To confirm Small Business eligibility, first request that employee log-in with user name and password. | Met |
| SH-144 | Small Business | Prepare Employee Application | Oracle Identity Manager | Prompt employees to update all account information, including the password upon initial log in. | Deleted |
| SH-145 | Small Business | Verify Employee Application Data | OneGate | Conduct a validation of SSN provided versus the name provided (i.e. validate against name on record with Social Security Administration database). Track any validations made. | Validated |
| SH-146 | Small Business | Verify Employee Application Data | OneGate | Provide capability to verify if employee exists on employee roster in order to verify an employee's coverage through an employer. | Met |



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|---|---|---|---|---|---|
| SH-147 | Small Business | Verify Employee Application Data | OneGate | Display the result of the verification process. | Met |
| SH-148 | Small Business | Determine Employee Eligibility | OneGate | Update user /employee account status based on updated employee coverage results | Met |
| SH-149 | Small Business | Determine Employee Eligibility | OneGate | Provide the capability to track the response / status of employees who have been offered employer-sponsored coverage. Key statuses to track include waiver of coverage / elected for coverage / non-participation. | Met |
| SH-151 | Small Business | Prepare Employee Application | OneGate | Present an initial set of screening questions in the initial employee application process to identify the following applicant characteristics:<br>- Employee name<br>- Employee Address<br>- Social security number<br>- Other Employee Contact Information<br>- Employer Name<br>- Worksite Address | Validated |
| SH-152 | Small Business | Prepare Employee Application | OneGate | Provide the capability to use the model single employee application provided by HHS. | Validated |
| SH-153 | Small Business | Prepare Employee Application | OneGate | Provide additional language support in accordance with Exchange language support guidelines. | Validated |
| SH-154 | Small Business | Prepare Employee Application | OneGate | Provide field level help for each application data element that includes description and required data format. | Met |
| SH-155 | Small Business | Prepare Employee Application | OneGate | Provide capability for employees to access in-depth online help during the application process. | Validated |
| SH-157 | Small Business | Prepare Employee Application | OneGate | During the Application Process, prompt the Employee to enter the exact name associated with the SSN. | Validated |



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|---|---|---|---|---|---|
| SH-158 | Small Business | Prepare Employee Application | OneGate | If an application is initiated by a Navigator, the Exchange shall have the capability for the employee to attest that the information provided by the Navigator is accurate. | Validated |
| SH-159 | Small Business | Prepare Employee Application | OneGate | Provide the capability to identify Navigators (or Brokers, etc.) if they are completing applications on behalf of an employee. | Validated |
| SH-160 | Small Business | Prepare Employee Application | OneGate | Accept paper documents for Small Business, including employee applications. | Validated |
| SH-161 | Small Business | Prepare Employee Application | OneGate | Validate field-level information for correct data format and completeness. | Met |
| SH-162 | Small Business | Prepare Employee Application | Loqate | Conduct validation of mailing addresses provided in applications through attestation | Validated |
| SH-163 | Small Business | Prepare Employee Application | OneGate | Conduct a validation of SSN provided versus the employee name provided (i.e. validate against name on record with SSN database) and provide capability to validate SSN versus other criteria. | Validated |
| SH-164 | Small Business | Prepare Employee Application | OneGate | For employees who do not have a SSN, allow the application process to proceed. | Validated |
| SH-165 | Small Business | Prepare Employee Application | OneGate | Within the QHP application, the Exchange shall validate field-level information for format and completeness. | Met |
| SH-166 | Small Business | Prepare Employee Application | OneGate | During the application process, user accounts shall be created that include the following, and will be linked to the following information in the Employee Roster:<br>- Employee Names and Employee SSN<br>- Employer EIN | Met |
| SH-167 | Small Business | Prepare Employee Application | OneGate | Save application information to user account after account creation. | Met |



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| Ref Code | Category | Sub Category | Application or Module | Requirement Description "The system shall..." | Current Disposition |
|---|---|---|---|---|---|
| SH-168 | Small Business | Prepare Employee Application | Oracle Identity Manager | Prior to the creation of a new user account, the Exchange shall determine if an existing user account is present based on matching criteria provided in the application (e.g. SSN, name, identifying questions) | Met |
| SH-169 | Small Business | Prepare Employee Application | Oracle MDM (Customer Hub) | If consumers can be enrolled in Medicaid and Small Business simultaneously, a consumers' unique identifier shall indicate this dual enrollment for any consumers that are enrolled in both Medicaid and Small Business. | Validated |
| SH-170 | Small Business | Prepare Employee Application | OneGate | During the application process, user accounts shall allow for the inclusion of the following:<br>- User unique identifier<br>- User demographic information<br>- Application status<br>- Enrollment status | Validated |
| SH-171 | Small Business | Employee Selects QHP | OneGate | Generate a request to initiate the employee selection of qualified health plan after eligibility determination is verified or if employee participation is allowed pending verification of eligibility information. | Deleted |
| SH-172 | Small Business | Employee Selects QHP | OneGate | Produce a real-time electronic request to the employee to determine employee preferences for qualified health plan(s). | Deleted |
| SH-173 | Small Business | Employee Selects QHP | OneGate | Allow employee to enter information about employee dependents, if employers are choosing to provide coverage to employees' dependents. Dependent information gathered will include, but is not limited to the following:<br>- Name<br>- Date of Birth<br>- Address<br>- Phone Number<br>- Gender<br>- Smoking Status<br>- Indian Status | Validated |
| SH-174 | Small Business | Verify Indian Status | OneGate | Provide capability to validate employee Indian status of employee and/or dependent(s) submitted through the employee application. | Deleted |
| SH-175 | Small Business | Plan Selection | OneGate | Based on carrier and plan information gathered, display plan cost and availability. | Validated |



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|---|---|---|---|---|---|
| SH-176 | Small Business | Employee Selects QHP | OneGate | As a default, only display health plans that have been selected by the employer, are certified by the Exchange, are open to additional enrollment, and are available in the employee's geographic area. | Met |
| SH-177 | Small Business | Employee Selects QHP | OneGate | Display projected actual plan cost (net premium) based on employer groups and applicable rating factors (consumers covered, age, geography, quality ratings, etc.) to the employee during the application process. | Met |
| SH-178 | Small Business | Employee Selects QHP | OneGate | Provide capability to display a detailed comparison of available employer-selected health plans based on employee preferences | Validated |
| SH-179 | Small Business | Employee Selects QHP | OneGate | Store enrollment questionnaire responses and display plan choices based on application / filtering criteria. | Deleted |
| SH-180 | Small Business | Employee Selects QHP | OneGate | Provide capability to view and select plan(s) for employee dependents, if covered by employer | Validated |
| SH-181 | Small Business | Employee Selects QHP | OneGate | Grant access to an updated provider directory for employee plan selection. This directory should be current at the point in time in which the employer accesses the directory. | Deleted |
| SH-182 | Small Business | Employee Selects QHP | OneGate | Provide capability for employees to adjust employee preferences and update display / comparison of available qualified health plans. This capability includes the ability to further refine or constrain filtering criteria to either display a greater or lesser number of plan choices, and the ability to view all available plans based on a specified tier based on employer selection. | Met |
| SH-183 | Small Business | Employee Selects QHP | OneGate | Provide information and provide capability to allow employees determine if their premium costs are such that the costs make the employee eligible for purchasing insurance through the individual market or allow the employee to be exempt from the individual mandate, due to federal law. If either is scenario is likely, invite employee to explore these options further at the Individual Exchange. | Validated |
| SH-184 | Small Business | Employee Selects QHP | OneGate | Allow employees to have a choice of Exchange's competing plans, based on employer selections and (given the employer contribution) see what their contribution requirement would be for each choice | Validated |



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| SH-185 | Small Business | Employee Selects QHP | OneGate | Provide capability for an employee to select QHP(s) and initiate the enrollment process. | Validated |
| SH-186 | Small Business | Employee Selects QHP | OneGate | Update an employee's account to reflect plan selection and the effective projected plan-year. | Validated |
| SH-187 | Small Business | Employee Selects QHP | 3rd Party Premium Processor | After plan selection, initiate the financial transactions required by employers to ensure plan enrollment process / transaction to applicable carriers. | Validated |
| SH-188 | Small Business | Employee Selects QHP | OneGate | After acknowledgement of the receipt of the plan selection, initiate the calculation of the final cost to employee | Validated |
| SH-189 | Small Business | Employee Selects QHP | OneGate | After acknowledgement of the receipt of the plan selection, display the calculation of the final cost (net premium) to employee | Met |
| SH-190 | Small Business | Employee Selects QHP | OneGate | Provide a reminder that an employee receives tax relief when the employee purchases health insurance via their employer at through a pre-tax payroll deduction. | Validated |
| SH-192 | Small Business | Employee Selects QHP | OneGate | Provide the capability to verify and acknowledge the receipt of the plan selection. | Met |
| SH-193 | Small Business | Employee Selects QHP | OneGate | Upon employee's QHP selection, notify the employer of it own and each employee's respective contribution amount in order to facilitate appropriate payroll deductions as needed | Validated |
| SH-195 | Small Business | Employee Enrollment in QHP | OneGate | Receive and process acknowledgement of employee enrollment from Issuer | Validated |
| SH-198 | Small Business | Update Employee Eligibility Application | OneGate | Allow employees to enroll in QHP during a qualifying event. | Validated |
| SH-199 | Small Business | Disenroll Employee in QHP | OneGate | Provide the capability for an employee to request a voluntary disenrollment from QHP(s). | Validated |
| SH-201 | Small Business | Disenroll Employee in QHP | OneGate | If an employee initiates a voluntary disenrollment through the Exchange, produce an electronic notification to the Issuer to disenroll the employee. | Validated |
| SH-202 | Small Business | Disenroll Employee in QHP | OneGate | Provide capability to initiate the disenrollment process. | Validated |



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| Ref Code | Category | Sub Category | Application or Module | Requirement Description "The system shall..." | Current Disposition |
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| SH-203 | Small Business | Disenroll Employee in QHP | OneGate | Provide capability to update user accounts based on disenrollment notification from issuers | Validated |
| SH-204 | Small Business | Disenroll Employee in QHP | OneGate | Update user accounts based on disenrollment notification from disenrollment initiated by the Exchange. | Validated |
| SH-206 | Small Business | Disenroll Employee in QHP | ?? | Provide capability to receive electronic notifications from Issuers regarding disenrollment and initiate disenrollment process. | Validated |
| SH-209 | Small Business | Disenroll Employee in QHP | OneGate | If conditions for an involuntary disenrollment are met, initiate the disenrollment process. | Validated |
| SH-211 | Small Business | Disenroll Employee in QHP | OneGate | Update user accounts based on disenrollment notification from issuers or disenrollment initiated by the Exchange. | Validated |
| SH-214 | Small Business | Update Employee Application / Renew Employee QHP Participation | Oracle Identity Manager | If an employee does not have their log-in information (User name and/or password) available to them for plan renewal, present opportunity for the employee to request their log-in information. The log-in information may be emailed to the employee after their identity is confirmed. | Validated |
| SH-215 | Small Business | Renew Employee QHP Participation | OneGate | Track annual renewal date for employers. | Validated |
| SH-216 | Small Business | Update Employee Application / Renew Employee QHP Participation | OneGate | Based on employee status, determine eligibility for Small Business Exchange participation renewal. | Validated |



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|---|---|---|---|---|---|
| SH-218 | Small Business | Update Employee Application / Renew Employee QHP Participation | Oracle Identity Manager | Provide capability for employees to look up or reset login credentials. | Validated |
| SH-221 | Small Business | Update Employee Application | OneGate | Provide capability for employees to submit changes to key eligibility factors for the purpose of annual eligibility / enrollment renewal. Supported methods of reporting changes include written forms and web-based responses through the Exchange. | Deferred |
| SH-222 | Small Business | Update Employee Application | OneGate | Process employee response to renew eligibility and initiate eligibility determination process if necessary. Review employee Exchange eligibility. Have the capability to adjudicate mandatory / optionally reported changes and the resultant changes to eligibility and enrollment. | Deferred |
| SH-223 | Small Business | Renew Employee QHP Participation | OneGate | Provide the capability to calculate a year-to-date average for premiums paid for display to the employee at time of renewal. | Deferred |
| SH-224 | Small Business | Update Employee Application | OneGate | If reported changes do not qualify an employee for a special enrollment, store the eligibility / household changes for use during the next available open enrollment period. | Deferred |
| SH-225 | Small Business | Renew Employee QHP Participation | OneGate | If the employee's current plan(s) are no longer available, automatically suggest employee participation for a default health plan(s) for a geographic area. | Deleted |
| SH-226 | Small Business | Renew Employee QHP Participation | OneGate | Based on the availability of QHP(s), determine availability of an employee's current plan for the purposes of enrollment renewal. | Deleted |
| SH-227 | Small Business | Update Employee Application | OneGate | Provide capability for employees to submit changes to Small Business plan participation (selected plan(s), selected tier (optional), covered dependents, etc.). Supported methods of enrollment changes include written forms and web-based responses through the Exchange. | Validated |



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|---|---|---|---|---|---|
| SH-228 | Small Business | Renew Employee QHP Participation | OneGate | Based on an employee's responses to enrollment renewal, assess responses for need to initiate enrollment into a new QHP or additional employees (or employers) into an existing QHP. | Deleted |
| SH-229 | Small Business | Employee Enrollment in QHP | OneGate | Process notification to employer of coverage for employees. Also, communicate any next steps required by the employer. | Validated |
| SH-230 | Small Business | Determine Employee Eligibility | OneGate | Provide the functionality to determine if an update to an employee account is categorized as a Qualifying Event. | Validated |
| SH-231 | Small Business | Update Employee Application | OneGate | Provide capability for employees to submit changes to employee plan (add / remove dependents) in between redeterminations / renewals and due to qualifying events. | Validated |
| SH-234 | Small Business | Change Reporting | OneGate | Initiate enrollment or disenrollment process for employee or the employee's dependents, depending on the nature of the Qualifying Event. | Validated |
| SH-235 | Small Business | Change Reporting | OneGate | Provide the capability for employees to submit changes to the employee contact information. | Validated |
| SH-238 | Small Business | Periodic Reporting and Reconciliation | OneGate | Allow employers and brokers/assisters to view and track the premium payment. | Validated |
| FM-001 | Financial Management | Fed APTCs and CSRs | CGI | Generate daily transactional 834 transaction file in a HIPAA compliant format on all individuals enrollment updates for the Exchange | Validated |
| FM-002 | Financial Management | Fed APTCs and CSRs | CGI | Transmit daily transactional 834 transaction file in a HIPAA compliant format of individuals enrolled in QHPs to CMS | Validated |
| FM-003 | Financial Management | Fed APTCs and CSRs | CGI | Generate monthly 834 transaction file in a HIPPA compliant format of individuals enrolled in QHPs, including Federal APTC, CSR amounts to support the monthly reconciliation process with CMS and Issuers. | Validated |
| FM-004 | Financial Management | Fed APTCs and CSRs | CGI | Transmit monthly 834 transaction file in a HIPPA compliant format of individuals enrolled in QHPs, including Federal APTC, CSR and State Premium Subsidy and CSR amounts to CMS to support the monthly reconciliation process with CMS. | Validated |



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| Ref Code | Category | Sub Category | Application or Module | Requirement Description "The system shall..." | Current Disposition |
|---|---|---|---|---|---|
| FM-005 | Financial Management | Fed APTCs and CSRs | CGI | Transmit monthly 834 transaction file in a HIPPA compliant format of individuals enrolled in QHPs, including Federal APTC, CSR and State Premium Subsidy and CSR amounts to Issuers to support the monthly reconciliation process with Issuers. | Validated |
| FM-006 | Financial Management | Fed APTCs and CSRs | CGI | Update Exchange financial data with Federal APTC, CSR and State Premium Subsidy, CSR payments to Issuers for updating into the State's General Ledger, and forward to the Premium Processor. | Validated |
| FM-009 | Financial Management | Fed APTCs and CSRs | CGI | Receive electronic reports of payments from CMS to Issuers for federal APTC and CSR amounts | Validated |
| FM-011 | Financial Management | APTCs and CSRs | CGI | Provide the ability to identify, analyze and resolve Federal APTC and Federal CSR discrepancies between CMS and the Exchange Eligibility and Enrollment data store | Validated |
| FM-012 | Financial Management | Fed APTCs and CSRs | CGI | Update State's G/L (Vision) system with electronic Issuer Federal APTC/CSR payment data | Validated |
| FM-014 | Financial Management | Fed APTCs and CSRs | CGI | Provide tool to adjust identified discrepancies between the Vision database and data received from Issuers, and/or CMS | Deleted |
| FM-018 | Financial Management | Fed APTCs and CSRs | CGI | Update Individual Eligibility and Enrollment database to reflect discrepancy resolution between CMS, Issuer, HBE and Premium Processor | Validated |
| FM-027 | Financial Management | Small Business Premium Collection | CGI | Provide functionality that allows a Small Business to create a notification that invoice discrepancy exists. | Validated |
| FM-033 | Financial Management | Small Business Premium Collection | CGI | Provide the ability for small businesses to view payment history and data. | Validated |
| FM-034 | Financial Management | Small Business Premium Collection | CGI | Identify and account for discrepancies between Small Business payments and CMS reported payments (reconciliation). | Deleted |



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|---|---|---|---|---|---|
| FM-044 | Financial Management | State Option to Collect Individual Premiums through the Exchange | CGI | Provide the ability for an individual to view their invoice online. | Validated |
| FM-045 | Financial Management | State Option to Collect Individual Premiums through the Exchange | CGI | Provide invoice discrepancy notification capabilities for Individual to Exchange. | Validated |
| FM-053 | Financial Management | State Option to Collect Individual Premiums through the Exchange | CGI | Provide the ability for individual users to view payment history and data. | Validated |
| FM-059 | Financial Management | Small Business Premium Discrepancy Resolution | CGI | Receive Small Business invoice discrepancy notification. | Validated |
| FM-060 | Financial Management | Small Business Premium Discrepancy Resolution | CGI | Provide inquiry screens to research the Small Business discrepancy | Validated |
| FM-061 | Financial Management | Small Business Premium Discrepancy Resolution | CGI | Notify authorized users of the Small Business reported discrepancy. | Validated |



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|---|---|---|---|---|---|
| FM-062 | Financial Management | Small Business Premium Discrepancy Resolution | CGI | Provide capability for small businesses to update small business account and make adjustments. | Validated |
| FM-070 | Financial Management | Individual Premium Discrepancy Resolution | CGI | Provide ability for Individuals to log into Exchange and view notifications and invoice | Duplicate |
| FM-072 | Financial Management | Individual Premium Discrepancy Resolution | CGI | Provide automated process to identify invoice discrepancies from an individual. | Deleted |
| FM-073 | Financial Management | Individual Premium Discrepancy Resolution | CGI | Provide notification to individual that discrepancy report was received from the individual. | Deleted |
| FM-074 | Financial Management | Individual Premium Discrepancy Resolution | CGI | Provide inquiry screens to research the individual and family units discrepancy | Validated |
| FM-075 | Financial Management | Individual Premium Discrepancy Resolution | CGI | Notify authorized users of the reported Individual or Family Unit discrepancy. | Validated |
| FM-082 | Financial Management | Issuer Payment Reconciliation | CGI | Receive electronic or telephonic notification of discrepancy from Issuer. | Validated |
| FM-085 | Financial Management | Issuer Payment Reconciliation | CGI | The system will provide screens to update Exchange records with corrected invoice / payment information for Issuers, Small Businesses, or Individual (including Family Unit) records. | Validated |



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|---|---|---|---|---|---|
| FM-086 | Financial Management | Risk Adjustment Calculation | CGI | Provide regular reports and data on Exchange enrollees to support risk adjustment calculations. Data will include, but is not limited to: unique individual identifier, plan enrolled in, the type of coverage purchased, rating criteria information, demographic data, and effective dates for individual and small group market non-grandfathered plans. | Deleted |
| FM-087 | Financial Management | Risk Adjustment Calculation | CGI | Provide regular reports and data on QHPs and encounters to CMS to support risk adjustment calculation. | Deleted |
| FM-088 | Financial Management | Risk Adjustment Calculation | CGI | Provide the capacity to electronically receive information from Issuers on non-exchange enrollees from individual, Small Business and self-funded plans inside and outside of the state | Deleted |
| FM-089 | Financial Management | Risk Adjustment Calculation | CGI | Provide the capacity to electronically receive non QHP plan and rate setting data from CMS and other state sources | Deleted |
| FM-090 | Financial Management | Risk Corridors | CGI | Extract and send Individual and SHOP Plan data to CMS for risk corridors | Deleted |
| FM-091 | Financial Management | Risk Corridors | CGI | Receive unpaid Risk Corridor Charge information from CMS | Deleted |
| FM-106 | Financial Management | Exchange Internal Accounting | CGI | Track operational and overhead expenses of the Exchange. | Deleted |
| FM-107 | Financial Management | Exchange Internal Accounting | CGI | The Exchange system will summarize and apply general ledger coding to the financial transactions | Validated |
| FM-108 | Financial Management | Exchange Internal Accounting | CGI | The Exchange system will update Vision with aggregated financial information | Validated |
| FM-109 | Financial Management | Exchange Internal Accounting | CGI | Transmit the general ledger transactions to the accounting system. | Duplicate |
| FM-110 | Financial Management | Exchange Internal Accounting | CGI | The Exchange will provide detail reports to support and reconcile the Exchange Annual Financial Report | Validated |



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|---|---|---|---|---|---|
| FM-111 | Financial Management | Exchange Internal Accounting | CGI | The Premium Processor shall provide annual SSAE No. 16 report to the State | Validated |
| FM-112 | Financial Management | Exchange Internal Accounting | CGI | The System shall create regular and ad-hoc reporting on an as-needed basis to govern and monitor the Exchange financial health based on the HBE data store | Validated |
| FM-113 | Financial Management | Exchange Internal Accounting | CGI | Provide selected financial information required to support building the Exchange Annual Financial Report as required by CMS and other state entities, including information sent by Premium Processor to the HBE data store | Validated |
| New-002 | Financial Management | State premium subsidies | CGI | Quarterly, report to the State the state premium subsidy payments that have not been forwarded to the Issuer due to a lack of matching premium payments from the individual. | Validated |
| New-004 | Financial Management | Exchange Internal Accounting | CGI | The Exchange System will provide the tools and information required to support the audit of the financial aggregate report from the General Ledger through to the Premium Processor financial transactions. | Validated |
| New-005 | Financial Management | | CGI | The Exchange system shall provide an aggregated report in a GAAP compliant format for each Individual and Family Unit:<br>• QHP premiums due for a reporting period (month)<br>• Payments made, period to date (month)<br>• Payments applied to QHP premiums for a period (month) | Validated |
| New-006 | Financial Management | | CGI | The Exchange system provide an aggregated report in a GAAP compliant format for each Small Business:<br>• QHP Premiums for a reporting period (month)<br>• Payments made, period to date (month)<br>• Payments applied to QHP premiums for a period (month) | Validated |
| New-007 | Financial Management | | CGI | The Exchange system shall provide an aggregated report in a GAAP compliant format for each Individual and Family Unit:<br>• Federal APTC/CSR subsidy calculated for an Individual for a reporting period (month)<br>• Federal APTC/CSR subsidy payment paid to the Issuer for an Individual for a reporting period (month) | Validated |



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|---|---|---|---|---|---|
| New-008 | Financial Management | | CGI | The Exchange system shall provide an aggregated report in a GAAP compliant format for each Individual and Family Unit:<br>• State Premium Subsidy and State CSR calculated for an Individual for a reporting period (month)<br>• State premium subsidy and State CSR paid to the Issuer for an Individual for a reporting period (month) | Validated |
| New-009 | Financial Management | | CGI | The Exchange system shall provide the State transaction financial information weekly. | Validated |
| New-012 | Financial Management | | CGI | The Exchange system shall provide an aggregated report where the information is GAAP compliant with details available for Individual NSF transaction summaries. | Deferred |
| New-013 | Financial Management | | CGI | The Exchange system shall provide real-time access to financial data to support Exchange operations including real-time customer service and self service. | Validated |
| New-016 | Financial Management | | CGI | The System shall provide Premium Processing costs to the State monthly. | Validated |
| New-017a | Financial Management | | CGI | The System shall provide monthly reports on credit card fees. | Validated |
| New-018 | Financial Management | State Premium Subsidy and CSR | CGI | The System shall generate a file of individuals enrolled in QHPs, including State Premium Subsidy, State CSR amounts to support the monthly reconciliation process with State and Issuers | Validated |
| New-019 | Financial Management | Eligibility and State Premium Subsidy and CSR | CGI | Establish individual eligibility and determine State Premium Subsidy amount. | Validated |
| New-020 | Financial Management | Eligibility and State Premium Subsidy and CSR | CGI | Establish individual eligibility and determine State CSR amount. | Validated |



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|---|---|---|---|---|---|
| New-021 | Financial Management | Federal APTC and CSR, State Premium Subsidy and CSR | CGI | Transmit daily transactional 834 transaction file in a HIPAA compliant format of individuals enrolled in QHPs to CMS generate Individual enrollment updates from the Exchange, including Federal APTC and CSR and State Premium Subsidy and State CSR amounts to the Premium Processor. | Validated |
| New-022 | Financial Management | Eligibility and APTC and CSR | CGI | Transmit daily Individual enrollment updates from the Exchange, including eligibility and Federal APTC and Federal CSR, State Premium Subsidy and Federal CSR amounts to the Premium Processor. | Validated |
| New-023 | Financial Management | State Premium Subsidy and CSR | CGI | Generate daily transactional file on all individual enrollment updates for the Exchange including State CSR amounts | Validated |
| New-024 | Financial Management | State Premium Subsidy and CSR | CGI | Transmit daily transactional file on all individuals enrolled in QHPs including State CSR amounts to Issuers | Validated |
| New-100 | | Individual Premium Discrepancy Resolution | CGI | Send premium payment reports via EDI 820 transactions to the Issuers. | Validated |
| New-101 | | Small Business | CGI | Send premium payment reports via EDI 820 transactions to the Issuers. | Validated |
| New-101 | | Small Business | CGI | Send premium payment reports to the State's Medicaid Business Office. | Validated |
| New-103 | Financial Management | Exchange/State Agencies | CGI | Send termination notification to the Premium Processor. | Validated |
| New-106 | | Individual Premium Discrepancy Resolution | CGI | Receive notification of termination from Issuers | Validated |
| New-107 | | Individual Premium Discrepancy Resolution | CGI | Send notification of termination to Premium Processor | Validated |



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|---|---|---|---|---|---|
| New-108 | | Small Business | CGI | Receive notification of termination from Issuers | Validated |
| New-109 | | Small Business | CGI | Send notification of termination to Premium Processor | Validated |
| New-120 | | State Premium Subsidy and CSR | CGI | Receive actual State CSR due amounts from the Issuers, and forward to Premium Processor. | Validated |
| New-130 | | Fed APTCs and CSRs | CGI | Receive electronic payment history report from Issuers and forward to the Premium Processor | Validated |
| PPRFP-002 | Financial Management | State Option to Collect Individual Premiums through the Exchange | CGI | Provide an electronic method for use by each family unit, navigator/broker/in-person assistor or customer service agent to set up a premium payment account. | Validated |
| PPRFP-003 | Financial Management | State Option to Collect Individual Premiums through the Exchange | CGI | Enable each family unit to choose the manner by which it will receive notifications (e.g., invoices, correspondence). | Validated |
| PPRFP-023 | Financial Management | State Option to Collect Individual Premiums through the Exchange | CGI | Receive termination notification from the Issuer and the State's Medicaid Business Office. | Validated |
| PPRFP-033 | Financial Management | Small Business | CGI | Provide an electronic method for use by each small business, navigator/broker/in-person assistor or customer service agent to set up a premium payment account. | Validated |
| PPRFP-034 | Financial Management | Small Business | CGI | Enable each small business to choose the manner (e.g., electronic, paper) by which it will receive notifications (e.g., invoices, correspondence). | Validated |
| CACM-01 | Consumer Assistance | Case Management | OneGate | Provide the ability to add multiple dated narratives to a case and track and maintain changes over time via the narratives. | Met |



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|---|---|---|---|---|---|
| CACM-02 | Consumer Assistance | Case Management | OneGate | Maintain a history of notices that have been sent to a individual, employer, Navigator, Broker. | Met |
| CACM-03 | Consumer Assistance | Case Management | OneGate | Maintain and a history of a individual's eligibility status over time. | Met |
| CACM-04 | Consumer Assistance | Case Management | OneGate | Allow Caseworkers and Customer Support staff to modify the eligibility/enrollment record to indicate beginning and ending dates of coverage and specify the program or product for which the individual is eligible. | Met |
| CACM-05 | Consumer Assistance | Case Management | OneGate | Allow Caseworkers and Customer Support staff to deactivate a particular customer's case. | Met |
| CACM-06 | Consumer Assistance | Case Management | OneGate | Allow Caseworkers and Customer Support staff shall to reactivate a client's case based on new information, new application or redetermination. | Met |
| CACM-07 | Consumer Assistance | Case Management | OneGate | Provide mechanism to check and flag duplicate individual cases. | Met |
| CACM-08 | Consumer Assistance | Case Management | OneGate | Allow Customer Service Supervisors to merge multiple individual cases into one, or split single cases into multiples cases when they deem it warranted. | Validated |
| CACM-09 | Consumer Assistance | Case Management | OneGate | Allow Caseworkers and Customer Support staff to mark a case duplicate, but remain unmerged. | Met |
| CACM-10 | Consumer Assistance | Case Management | OneGate | Allow Caseworkers and customer support staff the ability to search for a specific individuals' information. | Met |
| CACM-11 | Consumer Assistance | Case Management | OneGate | Allow Caseworkers and Customer Support staff to view individual information entered into the Portal from the Case Mgmt system. | Met |
| CACM-12 | Consumer Assistance | Case Management | OneGate | Allow Caseworkers and Customer Support Staff to add to a individual's information. | Met |
| CACM-13 | Consumer Assistance | Case Management | OneGate | Allow Caseworkers and Customer Support Staff to change or modify an individual's information. | Met |
| CACM-14 | Consumer Assistance | Customer Application Intake Process | OneGate | Allow Caseworkers and Customer Support staff to search for the individual's eligibility details. | Met |



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|---|---|---|---|---|---|
| CACM-15 | Consumer Assistance | Customer Application Intake Process | OneGate | Allow Caseworkers and Customer Support Staff to view the individual's eligibility details (e.g., income sources, citizenship, immigration status, etc.). | Met |
| CACM-16 | Consumer Assistance | Customer Application Intake Process | OneGate | Allow Caseworkers and Customer Support staff to add new data into the individual's eligibility details (income sources, citizenship, immigration status, etc.). | Met |
| CACM-17 | Consumer Assistance | Case Management--Administration | OneGate | Provide a mechanism for role-based access control for any changes to the rules or parameters in the rules engine. | Met |
| CACM-18 | Consumer Assistance | Case Management--Administration | OneGate | Track changes made to an account in an auditable log. | Met |
| CACM-20 | Consumer Assistance | Case Management--System Access | OneGate | Allow supervisors to enter the system through a customized portal to view and manage all the cases of the caseworkers under their jurisdiction. | Met |
| CACM-21 | Consumer Assistance | Case Management--System Access | OneGate | Allow administrators to enter the system through a customized portal to view, manage, and if necessary correct case data if a computer systems error has occurred, as long as there is sufficient documentation noted in the record. Any system errors that are identified will be reviewed through a quality assurance process. | Met |
| CAG-01 | Consumer Assistance | Complaints / Appeals | Siebel Public Sector CRM | The system must support the complaints/appeals process. | Met |
| CAG-02 | Consumer Assistance | Complaints / Appeals | Siebel Public Sector CRM | The system shall allow customer support representative to log customer complaints and appeals. | Duplicate |
| CAG-03 | Consumer Assistance | Complaints / Appeals | Siebel Public Sector CRM | The system shall allow staff to attach relevant documents to complaint or appeal. | Met |
| CAG-04 | Consumer Assistance | Complaints / Appeals | Siebel Public Sector CRM | Associated recorded calls/transcripts and online chat sessions log with the appropriate appeal | Met |



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|---|---|---|---|---|---|
| CAG-05 | Consumer Assistance | Complaints / Appeals | Siebel Public Sector CRM | The system shall prompt customer support representative on complaints/grievances/ appeals/fair hearings workflow by integrating with workflow/document management system. | Validated |
| CAG-06 | Consumer Assistance | Complaints / Appeals | Siebel Public Sector CRM | The system will track time frames and deadlines for responding to complaints and appeals. | Met |
| CAG-07 | Consumer Assistance | Complaints / Appeals | Siebel Public Sector CRM | The system shall allow customer support representative to generate letters to consumer throughout grievance/appeals/fair hearings/complaints process. | Met |
| CAG-08 | Consumer Assistance | Complaints / Appeals | Siebel Public Sector CRM | The system shall track complaint or appeal throughout process so that specified Complaints/Appeals staff can view status, see where it is in process and report back to consumer at any time. | Met |
| CAG-09 | Consumer Assistance | Complaints / Appeals | Siebel Public Sector CRM | The system shall support the process for sending appeals/complaints to be reviewed by appropriate parties within and outside the State and recording decisions, adding documentation, etc. | Met |
| CAG-10 | Consumer Assistance | Complaints / Appeals | OneGate | The rules engine must reflect changes in enrollment, coverage, and tax credits as a result of a complaint, grievance, and appeal decision. | Met |
| CAG-11 | Consumer Assistance | Complaints / Appeals | Siebel Public Sector CRM | The system shall allow appeals/complaints staff to manage cases within the system using options including tickler files, response and review dates, document management, email, and fax. | Validated |
| CAG-12 | Consumer Assistance | Complaints / Appeals | Siebel Public Sector CRM | The system shall allow consumers to submit complaint/appeal via phone, web, chat session, email, and letter. | Validated |
| CAG-13 | Consumer Assistance | Complaints / Appeals | Siebel Public Sector CRM | The system shall provide options to secure complaints/appeals for confidentiality reasons (e.g. hide consumer name) and allow access to cases by specified consumer support staff. | Validated |
| CAG-14 | Consumer Assistance | Complaints / Appeals | Siebel Public Sector CRM | The system shall monitor appeals/complaints due dates and alert staff or management of overdue status. | Validated |
| CAG-15 | Consumer Assistance | Complaints / Appeals | Siebel Public Sector CRM | The system shall have the ability to be used by multiple agencies for appeals/complaints, including at a minimum the Exchange, Medicaid, and the Department of Human Services. | Validated |
| CAG-16 | Consumer Assistance | Complaints / Appeals | Siebel Public Sector CRM | The system shall have the ability to assign a priority, or level to the appeal/complaint. | Met |
| CAG-19 | Consumer Assistance | Complaints / Appeals | Siebel Public Sector CRM | The system shall support outreach initiatives using letters, emails, phone calls, text messages as described below. | Validated |



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|---|---|---|---|---|---|
| CAG-20 | Consumer Assistance | Outreach / Education | Siebel Public Sector CRM | The system shall ask and store consumers' preferred method of communication. | Met |
| CAG-23 | Consumer Assistance | Outreach / Education | OneGate | The system shall support multi-lingual communication in at least the languages specified by the Exchange, and may able to support additional language (including languages that use non-Western scripts). | Met |
| CAG-24 | Consumer Assistance | Outreach / Education | Siebel Public Sector CRM | The system shall log and store materials about outreach and education events across the state and community to inform the CRM and call center staff. | Met |
| CAG-29 | Consumer Assistance | Outreach / Education | Siebel Public Sector CRM | The system shall flag consumer assistance staff or Navigators whenever a consumer calls and queries pre-defined questions. | Validated |
| CAG-31 | Consumer Assistance | Outreach / Education | Siebel Public Sector CRM | The system shall capture information on outreach efforts (e.g. how did you hear about us?). | Met |
| CAG-32 | Consumer Assistance | Workflow | Siebel Public Sector CRM | The system shall improve collaboration and workflow driven processes among staff by integrating CRM with workflow, document management and document imaging technology | Validated |
| CAG-33 | Consumer Assistance | Workflow | Siebel Public Sector CRM | The system shall have the ability to integrate voice and electronic transactions into a single workflow. | Deferred |
| CAG-34 | Consumer Assistance | Workflow | Siebel Public Sector CRM | The system shall have the ability to oversee and manage contacts through work item routing and queuing, sending online alerts to staff or supervisors if issues are high priority or overdue. | Validated |
| CAG-35 | Consumer Assistance | EDM | ThunderHeadNOW | Support electronic document management (EDM) capabilities | Met |
| CAG-36 | Consumer Assistance | EDM | ThunderHeadNOW | The system shall provide the ability to upload attachments to all individual and correspondence records. | Met |
| CAG-37 | Consumer Assistance | EDM | Siebel Public Sector CRM | The system shall provide the ability to view related correspondence records from a single correspondence record. | Validated |
| CAG-39 | Consumer Assistance | EDM | Siebel Public Sector CRM | The system shall link scanned images to correspondence and records to provide one view of all related material (images, letters, or contacts with staff). | Met |
| CAG-40 | Consumer Assistance | Contact Tracking | Siebel Public Sector CRM | The system shall assign a unique number to identify each instance of a contact. | Met |
| CAG-41 | Consumer Assistance | Contact Tracking | Siebel Public Sector CRM | The system shall accommodate the receipt and tracking of requests or inquiries via telephone, letter, fax, walk in, email, web, or any other channel used by the consumers. | Met |



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|---|---|---|---|---|---|
| CAG-42a | Consumer Assistance | Contact Tracking | Siebel Public Sector CRM | The system shall track and search on contacts with basic identifying information such as time and date of contact, caller name, contact type, reason or any combination thereof. | Validated |
| CAG-42b | Consumer Assistance | Contact Tracking | Siebel Public Sector CRM | The system shall track and search on contacts with basic identifying information such as Provider number, member number, agent ID, status of issue, or any combination thereof. | Validated |
| CAN-01 | Consumer Assistance | Navigators | OneGate | Provide consumers with general information regarding Navigator Program, including information regarding certification of Navigators and relationship to Exchange, Issuers, Providers and Brokers | Met |
| CAN-02 | Consumer Assistance | Navigators | OneGate | Allow certified Navigators to enter the portal through a distinct login. | Validated |
| CAN-03 | Consumer Assistance | Navigators | OneGate | Allow Navigators to create an account with the Exchange. | Validated |
| CAN-04 | Consumer Assistance | Navigators | OneGate | Require Navigators to provide credentials and certification information to establish an account. | Validated |
| CAN-05a | Consumer Assistance | Navigators | OneGate | Allow consumers to see the Navigator's credentials and certification information and select a Navigator based on them. | Validated |
| CAN-05b | Consumer Assistance | Navigators | OneGate | Flag Management if Navigator information is not up to date, or on probation for misconduct. | Deferred |
| CAN-06 | Consumer Assistance | Navigators | OneGate | Verify the information provided by the Navigator. | Deferred |
| CAN-07 | Consumer Assistance | Navigators | OneGate | Create an account for the Navigator and assign a unique ID that will be maintained in the Navigator account. | Validated |
| CAN-08 | Consumer Assistance | Navigators | OneGate | Track the number of persons assisted by each Navigator on a monthly basis and produce detailed reports on such activity. | Duplicate |
| CAN-09 | Consumer Assistance | Navigators | OneGate | Generate reports by Navigator; determining effectiveness by community, population, enrollment. | Duplicate |
| CAN-11 | Consumer Assistance | Navigators | OneGate | Provide a process to provide feedback or communication to the Navigators, in order for state agencies to communicate information | Validated |
| CAN-12 | Consumer Assistance | Navigators | OneGate | The system shall flag Management if Navigator has performance issues (e.g.., missing deadlines, aging and outstanding customer inquiries, incomplete applications, enrollment, etc.). | Validated |



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| Ref Code | Category | Sub Category | Application or Module | Requirement Description "The system shall..." | Current Disposition |
|---|---|---|---|---|---|
| PM-042 | Consumer Assistance | Evaluate QHP Issuer Application | TBD | Provide ability for Issuers to provide relevant Complaint and Compliance Information | Validated |
| PM-120 | Consumer Assistance | Maintain Operational Data | TBD | Provide the ability to receive, store and track electronic Issuer and Plan complaint data from the appropriate CMS system for plan management and fiscal management functions on a periodic basis. Complaint data can include:<br>- Issuer<br>- Plan<br>- Number of complaints<br>- Complaint type<br>- Complaint description/detail | Validated |
| PM-121 | Consumer Assistance | Maintain Operational Data | Siebel Public Sector CRM | Provide web-based interface for Exchange consumers, providers, brokers, navigators, etc. to enter complaints about Exchange Issuers and/or Plans will capture complaint data including:<br>- Exchange user id (for consumers, navigators, etc.)<br>- Provider id (for providers)<br>- Issuer<br>- Plan<br>- Complaint description/detail<br>- Complaint type<br>- Complaint source | Met |
| PM-122 | Consumer Assistance | Maintain Operational Data | Siebel Public Sector CRM | Provide automatic electronic notification of receipt for complaints submitted through the web interface. | Met |
| PM-123 | Consumer Assistance | Maintain Operational Data | Siebel Public Sector CRM | Allow Exchange users such as consumers, navigators, etc. to log into their Exchange account to post/submit a complaint | Met |



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|---|---|---|---|---|---|
| PM-124 | Consumer Assistance | Maintain Operational Data | Siebel Public Sector CRM | Provide the ability to accept electronic Issuer/Plan complaint data in secure manner, from Exchange Issuers on a periodic basis. Complaint data can include:<br>- Issuer<br>- Plan Involved<br>- Number and Type of Complaint<br>- Complaint rates<br>- Complaint response time | Validated |
| PM-125 | Consumer Assistance | Maintain Operational Data | Siebel Public Sector CRM | Track and manage complaints for the Exchange | Met |
| PM-126 | Consumer Assistance | Maintain Operational Data | Siebel Public Sector CRM | Use a common, standard format for complaint data from all sources to facilitate merging complaint data for analysis. | Validated |
| PM-127 | Consumer Assistance | Maintain Operational Data | Siebel Public Sector CRM | Allow complaint managers to classify complaints by attributes to support triaging complaints for action or referral | Met |
| PM-128 | Consumer Assistance | Maintain Operational Data | Siebel Public Sector CRM | Retain the source of the complaint (i.e. provider, issuer, Insurance Division, etc.) and the date received | Validated |
| PM-129 | Consumer Assistance | Maintain Operational Data | Siebel Public Sector CRM | Users must have a way to aggregate or combine multiple versions of the same complaint or relate multiple complaints to a single complaint case | Validated |
| PM-130 | Consumer Assistance | Maintain Operational Data | Siebel Public Sector CRM | Track and manage activities related to researching and addressing complaints from complaint receipt to completion/resolution of a complaint including who took action, what the action was, relevant dates, communication tracking, contacts, etc. | Validated |
| PM-131 | Consumer Assistance | Maintain Operational Data | Siebel Public Sector CRM | Provide the capability to auto-assign a complaint to a complaint worker or account manager based on information provided in the complaint | Validated |
| PM-132 | Consumer Assistance | Maintain Operational Data | Siebel Public Sector CRM | Notify a complaint worker that a complaint has been assigned/routed to that person | Met |



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| Ref Code | Category | Sub Category | Application or Module | Requirement Description "The system shall..." | Current Disposition |
|---|---|---|---|---|---|
| PM-133 | Consumer Assistance | Maintain Operational Data | Siebel Public Sector CRM | Allow reassignment of a complaint to a new complaint worker | Met |
| PM-136 | Consumer Assistance | Maintain Operational Data | Siebel Public Sector CRM | Publish approved complaint data summaries on the Exchange web portal for customer review , and to support transparency. | Validated |
| PM-137 | Consumer Assistance | Maintain Operational Data | Siebel Public Sector CRM | Provide electronic Exchange Issuer complaint data to the Insurance Division on a periodic basis. Complaint data can include:<br>- Issuer<br>- Number of complaints<br>- Complaint type<br>- Complaint description/detail | Validated |
| PM-138 | Consumer Assistance | Maintain Operational Data | Siebel Public Sector CRM | Provide the capability to send an electronic complaint referral to:<br>- An Issuer<br>- OIC<br>- Eligibility case/complaint workers<br>- Exchange customer service<br>- Others (to be defined) | Validated |
| SH-111 | Consumer Assistance | Appeal Small Business Eligibility Decision | Siebel Public Sector CRM | Provide the capability to capture information and details of a Employer complaint. | Validated |
| SH-121 | Consumer Assistance | Appeal Small Business Eligibility Decision | OneGate | Allow employers to request and receive a second appeal review process, providing very similar, if not the same, steps in the second appeal process as the first appeal process. | Validated |
| SH-156 | Consumer Assistance | Prepare Employee Application | Siebel Public Sector CRM | Provide capability for employees to request further assistance through Chat Support (online assistance from a customer service representative) during the application process. | Deferred |
| MO-1 | Consumer Assistance | CRM/Call Center Functionality | Siebel Public Sector CRM | The CRM shall manage contacts with, including but not limited to, Providers, Members, Consumers, Navigators, Brokers and other entities as identified by the Exchange. | Met |



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|---|---|---|---|---|---|
| MO-2 | Consumer Assistance | CRM/Call Center Functionality | Siebel Public Sector CRM | The system will support multimedia communications such as but not limited to: email, letter, phone, fax, web portal, chat, text messages. | Validated |
| MO-3 | Consumer Assistance | CRM/Call Center Functionality | Siebel Public Sector CRM | The system shall provide online access to customer support staff about caller information and real-time transaction activity (e.g. application status, premium payment). | Met |
| MO-4 | Consumer Assistance | CRM/Call Center Functionality | Siebel Public Sector CRM | The system shall provide the ability to archive and purge calls, contacts, correspondence from the CRM according to Exchange-defined criteria. | Validated |
| MO-5 | Consumer Assistance | CRM/Call Center Functionality | Siebel Public Sector CRM | The system shall have the ability to store the caller's preferred method of communication, including need for deaf or other language interpretation. | Met |
| MO-6 | Consumer Assistance | CRM/Call Center Functionality | Siebel Public Sector CRM | The system shall provide speech and hearing impaired customers with the ability to communicate through a Teletypewriter (TTY) or Telecommunications Display Device (TDD). | Validated |
| MO-7 | Consumer Assistance | CRM/Call Center Functionality | Siebel Public Sector CRM | The CRM solution shall seamlessly integrated with at least the following Customer Support technology systems and needs:<br>- Call logging and resolution tracking<br>- External IVR<br>- Electronic document management<br>- Training support<br>- Workflow management<br>- Reporting<br>- Quality Monitoring | Validated |
| MO-8 | Consumer Assistance | CRM/Call Center Functionality | Siebel Public Sector CRM | The system shall maintain a record of inquiry and correspondence data online, with periodic backups managed by CGI. The call center shall be able to store record of recordings of assisted calls, in a time frame specified by the Exchange. | Validated |
| MO-9 | Consumer Assistance | CRM/Call Center Functionality | Siebel Public Sector CRM | The system shall provide functionality that is capable of integrating with the integration tool to support billing, Enrollment/Eligibility, the secured access to the Case Management, and data integration with call management system. | Validated |



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|---|---|---|---|---|---|
| MO-10 | Consumer Assistance | CRM/Call Center Functionality | Siebel Public Sector CRM | The system shall be expandable in order to support multiple contact centers in separate physical locations that support different programs, including support for the Department of Human Services customer support functions. | Validated |
| MO-11 | Consumer Assistance | CRM/Call Center Functionality | Siebel Public Sector CRM | The system shall have the ability to enable security around confidential consumer data allowing designated staff access. | Validated |
| MO-12 | Consumer Assistance | IVR Technology | Siebel Public Sector CRM | The system shall interface with and support the use of an IVR system. | Validated |
| MO-13 | Consumer Assistance | ACD Technology | Siebel Public Sector CRM | The system shall provide Automatic Call Distribution (ACD) capability to answer calls from customers in sequence and record and report metrics. | Deferred |
| MO-14 | Consumer Assistance | ACD Technology | Siebel Public Sector CRM | The system shall provide capability to prioritize agents by availability, skill set, language, and overflow from other queues. | Deferred |
| MO-15 | Consumer Assistance | ACD Technology | Siebel Public Sector CRM | The system shall provide virtual hold and callback features when thresholds are met for wait time to allow consumers to hang up and receive an automated call when an agent is available. | Deferred |
| MO-16 | Consumer Assistance | ACD Technology | Siebel Public Sector CRM | The system shall have the ability to provide consumers with estimated wait time to speak with an agent and messaging that will remind consumer of other self service options, such as web site. | Deferred |
| MO-17 | Consumer Assistance | ACD Technology | Siebel Public Sector CRM | The system will allow individual contact centers to identify and set performance metrics (e.g. 3% abandonment rate, 15 second speed of answer). | Deferred |
| MO-18 | Consumer Assistance | ACD Technology | Siebel Public Sector CRM | The system will alert management and staff when service levels are not being met. | Deferred |
| MO-19 | Consumer Assistance | ACD Technology | Siebel Public Sector CRM | The system will provide a robust scheduling and forecasting component that allows management to staff call center appropriately; data provided will show peak hours, days, months. | Deferred |



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|---|---|---|---|---|---|
| MO-20 | Consumer Assistance | ACD Technology | Siebel Public Sector CRM | The ACD system will have the ability to monitor and provide real time reporting and forecasting software for:<br>- Abandonment rate<br>- Agent availability and productivity<br>- Average speed of answer<br>- Call length<br>- Contact volume<br>- Customer satisfaction<br>- Handle time<br>- One call resolution rate<br>- Peak hour statistics<br>- Identification of historical trends | Deferred |
| MO-21 | Consumer Assistance | ACD Technology | Siebel Public Sector CRM | The system shall allow authorized managers or supervisors to monitor active calls. | Deferred |
| MO-22 | Consumer Assistance | ACD Technology | Siebel Public Sector CRM | The system shall provide the capability to record all call interactions | Deferred |
| CAG-46 | Consumer Assistance | Quality Monitoring | Call Center | The system shall provide quality monitoring tools and processes to enable a continuous improvement cycle for the contact center staff that includes:<br>- Plug-in<br>- Silent monitoring (including remote)<br>- Record and review to assess whether call was answered accurately<br>- Voice and screen/multi-media monitoring<br>- Conferencing capabilities<br>- Ability to assess or rate an agent's quality and service using grading system and to store that data | Deferred |
| A-1 | Audit | Data Quality | Oracle Enterprise Data Quality | Perform periodic analysis of data for accuracy and potential individual contact for verification, and potentially, follow-up on incomplete information (e.g., dummy DOB or SSN) | Validated |
| A-2 | Audit | Eligibility Determination | OneGate | Maintain data to produce a report of the outcomes of rules execution for all eligibility determinations (positive or negative) for appeals research and to analyze correctness of eligibility functionality. | Validated |



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| Ref Code | Category | Sub Category | Application or Module | Requirement Description "The system shall..." | Current Disposition |
|---|---|---|---|---|---|
| A-3 | Audit | Transfer of Identification Information | All, as appropriate | The Exchange must maintain an audit trail of all information requests that contain Personal Identification (PII) or Personal Health Information (PHI) data as specified by the Privacy Act of 1974 and the Health Insurance Portability and Accountability Act (HIPAA). | Validated |
| A-4 | Audit | IRS Tax Information | All, as appropriate | The Exchange shall comply with any security and privacy requirements established by the IRS (e.g., Publication 1075 Tax Information Security Guidelines for Federal, State, and Local Agencies) to ensure proper and confidential handling and storage of Section 6103 Federal Tax Information data. In addition, any system handling tax information shall have audit trails that meet IRS standards. | Validated |
| A-5 | Audit | Risk Adjustment, Risk Corridors, and Reinsurance | Oracle BI | The Exchange must make certain claims and encounter data collected for the purposes of risk adjustment calculation are available to support other activities including, but not limited to: recalibrating Federally-certified risk adjustment models; verifying of risk corridor submissions; and verifying and auditing reinsurance claims. | Validated |
| A-6 | Audit | Security | All, as appropriate | To adequately respond to "breach notification requirements," the Exchange should maintain an audit trail to aid in recreating a security incident and determining the extent of the security breach. This data will aid in identifying who must be notified rather than having to notify all individuals. | Validated |
| A-8 | Program Integrity | Identity Management | Oracle Enterprise Data Quality | Retain sufficient data to allow periodic sampling and analysis to identify potential fraud, waste, and abuse. | Validated |
| A-10 | Program Integrity | Individual Identification | Oracle MDM (Customer Hub) | Retain sufficient data to allow periodic analysis of potentially duplicate individuals | Validated |
| A-12 | Program Integrity | Individual Identification | Oracle MDM (Customer Hub) | Provide the ability to successfully merge/unmerge potential duplicate individual records | Validated |
| A-9 | Program Integrity | Individual Identification | OneGate | The Exchange needs to keep track of all individual identity changes (e.g., marriage, legal name change, etc.) so that name searches under any name an individual has been know will be successful. | Validated |



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|---|---|---|---|---|---|
| | Web Analytics | Web Analytics | Google Analytics | Provide web analytics tools comparable to Google Analytics | Validated |
| | Web Analytics | Web Analytics | Splunk | Provide the capability to review raw web logs for usability and security analyses | Deferred |
| A-19 | Business Analytics | SHOP, EE,Plan Management | Oracle BI | The specific BI requirements for Exchange data have not been identified, but it will involve KPI definition, trend analysis, forecasting, statistical analysis, and aggregation of eligibility, enrollment and plan data. This data will include, but is not limited to:<br>- Cost breakdown per individual<br>- Cost breakdown per employee (SHOP)<br>- Cost breakdown per employer<br>- Plan data<br>- Individual and employee financial data<br>- Premium and CSR subsidy data<br>- Enrollment data<br>- Enrollee demographics | Validated |
| A-20 | Business Analytics | Platform | Oracle BI | The business analytics solution for the Exchange should not impact transactional database performance. | Validated |
| A-21 | Business Analytics | Platform | Oracle BI | The system must provide the ability to generate ad hoc reports. | Validated |
| A-22 | Business Analytics | Platform | Oracle BI | The system must provide the ability to download and save report data to individual workstations and applications. | Validated |
| A-23 | Business Analytics | Platform | Oracle BI | The system must provide the ability to transmit reports to various designated recipients in a secure manner. | Validated |
| A-24 | Business Analytics | Platform | Oracle BI | The system must provide the ability to roll-up (summarize data) and drill-down (view details) in reports online. | Validated |
| A-25 | Business Analytics | Platform | Oracle BI | The system must provide the ability to schedule the generation of reports at specific times. | Validated |
| A-26 | Business Analytics | Platform | Oracle BI | The system must provide the ability to notify and distribute reports based on user specified criteria. | Validated |
| A-27 | Business Analytics | Platform | Oracle BI | The system must provide the ability to organize reports into a shared list (library). | Validated |
| A-28 | Business Analytics | Platform | Oracle BI | The system must restrict access to the shared list (library) or items within a shared list (library) to designated users. | Validated |
| A-30 | Business Analytics | Platform | Oracle BI | The system must provide the ability to sort data within reports in multiple ways. | Validated |



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| Ref Code | Category | Sub Category | Application or Module | Requirement Description "The system shall..." | Current Disposition |
|---|---|---|---|---|---|
| A-31 | Business Analytics | Platform | Oracle BI | The system must provide the ability to present data in graphical or chart format. | Validated |
| A-32 | Business Analytics | Platform | Oracle BI | The system must provide the ability to limit report views based on user security / access rights. | Validated |
| A-33 | Business Analytics | Platform | Oracle BI | The system must allow the user to export formatted reports from the system in industry standard formats. | Validated |
| A-34 | Data Processing | Data Upload | Informatica | Allow uploads from authorized sources of data necessary to operate the Exchange | Validated |
| A-01 | AUDIT: DATA QUALITY | Data Quality | Oracle Enterprise Data Quality | Perform periodic analysis of data for accuracy and potential individual contact for verification, and potentially, follow-up on incomplete information (e.g., dummy DOB or SSN) | Validated |
| A-02 | AUDIT:ELIGIBILITY DETERMINATION | Eligibility Determination | OneGate | Maintain data to produce a report of the outcomes of rules execution for all eligibility determinations (positive or negative) for appeals research and to analyze correctness of eligibility functionality. | Validated |
| A-19 | BUSINESS ANALYTICS: SHOP, EE, PLAN MANAGEMENT | SHOP, EE,Plan Management | Oracle BI | The specific BI requirements for Exchange data have not been identified, but it will involve KPI definition, trend analysis, forecasting, statistical analysis, and aggregation of eligibility, enrollment and plan data. This data will include, but is not limited to:<br>- Cost breakdown per individual<br>- Cost breakdown per employee (SHOP)<br>- Cost breakdown per employer<br>- Plan data<br>- Individual and employee financial data<br>- Premium and CSR subsidy data<br>- Enrollment data<br>- Enrollee demographics | Validated |
| A-20 | BUSINESS ANALYTICS: PLATFORM | Platform | Oracle BI | The business analytics solution for the Exchange should not impact transactional database performance. | Validated |
| A-21 | BUSINESS ANALYTICS: PLATFORM | Platform | Oracle BI | The system must provide the ability to generate ad hoc reports. | Validated |



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| Ref Code | Category | Sub Category | Application or Module | Requirement Description "The system shall..." | Current Disposition |
|---|---|---|---|---|---|
| A-22 | BUSINESS ANALYTICS: PLATFORM | Platform | Oracle BI | The system must provide the ability to download and save report data to individual workstations and applications. | Validated |
| A-23 | BUSINESS ANALYTICS: PLATFORM | Platform | Oracle BI | The system must provide the ability to transmit reports to various designated recipients in a secure manner. | Validated |
| A-24 | BUSINESS ANALYTICS: PLATFORM | Platform | Oracle BI | The system must provide the ability to roll-up (summarize data) and drill-down (view details) in reports online. | Validated |
| A-25 | BUSINESS ANALYTICS: PLATFORM | Platform | Oracle BI | The system must provide the ability to schedule the generation of reports at specific times. | Validated |
| A-26 | BUSINESS ANALYTICS: PLATFORM | Platform | Oracle BI | The system must provide the ability to notify and distribute reports based on user specified criteria. | Validated |
| A-27 | BUSINESS ANALYTICS: PLATFORM | Platform | Oracle BI | The system must provide the ability to organize reports into a shared list (library). | Validated |
| A-28 | BUSINESS ANALYTICS: PLATFORM | Platform | Oracle BI | The system must restrict access to the shared list (library) or items within a shared list (library) to designated users. | Validated |
| A-30 | BUSINESS ANALYTICS: PLATFORM | Platform | Oracle BI | The system must provide the ability to sort data within reports in multiple ways. | Validated |
| A-31 | BUSINESS ANALYTICS: PLATFORM | Platform | Oracle BI | The system must provide the ability to present data in graphical or chart format. | Validated |
| A-32 | BUSINESS ANALYTICS: PLATFORM | Platform | Oracle BI | The system must provide the ability to limit report views based on user security / access rights. | Validated |
| A-33 | BUSINESS ANALYTICS: PLATFORM | Platform | Oracle BI | The system must allow the user to export formatted reports from the system in industry standard formats. | Validated |



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|---|---|---|---|---|---|
| CACM-19 | Consumer Assistance | Case Management - Administration | OneGate | The system must provide queries/reports to track and manage complaint workload, disposition, assignments and status | Validated |
| CAG-17 | Consumer Assistance | Complaints / Appeals | Siebel Public Sector CRM | The shall provide the capability to report complaint and appeals data in real time and on a historical basis. | Validated |
| CAG-25 | Consumer Assistance | Outreach / Education | Siebel Public Sector CRM | The system shall collect and report on call center metrics for the purposes of identifying outreach and education opportunities | Validated |
| CAG-26 | Consumer Assistance | Outreach / Education | Siebel Public Sector CRM | The system shall collect and report on website usage metrics including standard analytic metrics | Validated |
| CAG-27 | Consumer Assistance | Outreach / Education | Siebel Public Sector CRM | The system shall collect and report on user demographics as feasible from web and call center interactions for the purposes of informing education and outreach activities | Validated |
| CAG-28 | Consumer Assistance | Outreach / Education | Siebel Public Sector CRM | The system shall collect and report on Navigator web and call center interactions for the purposes of informing education and outreach opportunities. | Validated |
| CAG-43 | Consumer Assistance | Reporting | Siebel Public Sector CRM | The system shall generate ad-hoc and standard reports in real time as well as historical for incoming and outgoing contacts. | Validated |
| CAG-44 | Consumer Assistance | Reporting | Siebel Public Sector CRM | The system shall report on multiple data points: volume of contacts, by contact type, reason for contact, type of consumer, complaints, appeals, resolution, transfers to other programs, consumer satisfaction, by agent, specified time frames, fair hearing, grievances. | Validated |
| CAG-45 | Consumer Assistance | Reporting | Siebel Public Sector CRM | The system shall have the ability to extract data in user friendly formats, such as Excel. | Validated |
| CAN-08 | Consumer Assistance | Navigators | OneGate | Track the number of persons assisted by each Navigator on a monthly basis and produce detailed reports on such activity. | Duplicate |
| CAN-09 | Consumer Assistance | Navigators | OneGate | Generate reports by Navigator; determining effectiveness by community, population, enrollment. | Duplicate |
| CAN-10 | Consumer Assistance | Navigators | OneGate | Track Navigator performance metrics as defined by the state to determine effectiveness of Navigator or use incentive based compensation (e.g.., number of enrollees, referrals, problem resolution, etc.) | Validated |
| EN-36 | Eligibility and Enrollment | Periodic Reporting | Oracle BI | Periodically and on an ad hoc basis provide electronic report to issuers about individual QHP enrollment data | Validated |



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|---|---|---|---|---|---|
| EN-38 | Eligibility and Enrollment | Periodic Reporting | Oracle BI | Generate report of periodic issuer reconciliation to CMS | Validated |
| EN-39 | Eligibility and Enrollment | Periodic Reporting | OneGate | Generate annual report to individual about QHP enrollment | Deferred |
| EN-40 | Eligibility and Enrollment | Periodic Reporting | Oracle BI | Generate annual report to IRS about QHP enrollment | Deferred |
| PM-053 | Plan Management | Evaluate QHP Issuer Application | TBD | Provide the ability to compile Issuer and product plan application evaluation results | Deferred |
| PM-101 | Plan Management | Collect and Aggregate Plan Data | SERFF | Provide functionality to periodically submit required data to the appropriate CMS system for plan management and fiscal management functions including but not limited to reporting on the following data:<br>- Issuer data<br>- Plan data including<br>- Benefits structure<br>- rates<br>- enrollment | Validated |
| PM-104 | Plan Monitoring | Monitor Issuer/Plan Compliance | TBD | Provide analytical queries and reports to analyze plan compliance and monitoring data | Deleted |
| PM-106 | Plan Monitoring | Monitor Issuer/Plan Compliance | TBD | Provide the ability to analyze, display and report on performance data provided by Issuers | Deferred |
| PM-134 | Plan Management | Maintain Operational Data | Siebel Public Sector CRM | Provide queries/reports to track and manage complaint workload, disposition, assignments and status | Validated |
| PM-135 | Plan Management | Maintain Operational Data | Siebel Public Sector CRM | Provide sorts/reports/queries to support summarizing and analyzing complaints and complaint trends by a variety of complaint data attributes. | Validated |
| PM-136 | Plan Management | Maintain Operational Data | Siebel Public Sector CRM | Publish approved complaint data summaries on the Exchange web portal for customer review , and to support transparency. | Validated |



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|---|---|---|---|---|---|
| PM-157 | Plan Management | Maintain Operational Data | TBD | Provide analytic tools/reports/queries to support determining provider coverage adequacy of a plan by a variety of complaint data attributes including adequate coverage by geography and specialty | Deferred |
| PM-158 | Plan Management | Maintain Operational Data | TBD | The system must provide analytic tools/reports/queries to support determining Issuer/plan compliance with Exchange rules/policy | Deleted |
| PM-159 | Plan Management | Maintain Operational Data | TBD | The system must provide analytic tools/reports/queries to support determining provider coverage adequacy of the Exchange plan portfolio by a variety of complaint data attributes. | Deleted |
| PM-160 | Plan Management | Maintain Operational Data | OneGate | Upon authorized approval, the updated Provider Network for a plan or Issuer must be able to be published to the Exchange website for view by consumers. | Validated |
| PM-170 | Plan Management | Maintain Operational Data | TBD | Provide tools/sorts/reports/queries to support summarizing and analyzing transparency and quality data | Validated |
| RP-01 | Reporting | Business Analytics | Oracle BI | Provide a business analytics solution for the Exchange that will use a data warehouse for business intelligence, predictive analytics, and reporting. | Validated |
| RP-02 | Reporting | Business Analytics | Oracle BI | Enable ad hoc query and reporting capability by authorized users | Validated |
| RP-03 | Reporting | Business Analytics | Oracle BI | Store and recall saved queries created by authorized users | Validated |
| RP-04 | Reporting | Business Analytics | Oracle BI | Track and maintain history of all ad hoc queries and reports run within the system | Validated |
| RP-05 | Reporting | Business Analytics | Oracle BI | The data warehouse must, at a minimum, include the following dimensions:<br>- Demographic dimension<br>- Geographic dimension (including the entire State of VT) | Validated |
| RP-06 | Reporting | Eligibility and Enrollment | Premium Provider / OneGate / other approach | Generate a report to a qualified health plan issuer regarding the Exchange's records of current enrollment with the qualified health plan issuer. This report is used to reconcile enrollment records between the Exchange and the qualified health plan issuer. | Duplicate |



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| Ref Code | Category | Sub Category | Application or Module | Requirement Description "The system shall..." | Current Disposition |
|---|---|---|---|---|---|
| RP-07 | Reporting | Financial Management | Premium Provider / OneGate / other approach | Provide summary reporting tools to the Exchange to be able to support reporting to various stakeholders on: plans, benefits, plan rates, premium costs, any administrative costs if known; issuer information; plan enrollment information | Validated |
| RP-08 | Reporting | Financial Management | Oracle BI | Provide Exchange Enrollee Data to Risk Adjustment Entity | Deleted |
| RP-09 | Reporting | Financial Management | Oracle BI | Generate Monthly Report on Individual Enrollment in Qualified Health Plan | Validated |
| RP-10 | Reporting | Financial Management | Oracle BI | Generate report of Individual Premium Payment History to CMS | Validated |
| RP-11 | Reporting | Financial Management | Oracle BI | Generate and Send Enrollment Discrepancy Reports to Issuer and CMS | Validated |
| RP-12 | Reporting | Financial Management | Oracle BI | The Exchange will provide detail reports to support and reconcile the Annual Financial Report. | Validated |
| RP-13 | Reporting | Plan Management | Oracle BI | Provide regular reporting on Plan Data to CMS. Schema should include: Enrollment, Cost and administrative per plan, Issuers, Plans, Benefit structure, Plan rates, Complaints | Validated |
| RP-14 | Reporting | Plan Management | Oracle BI | Report on transparency and quality data to CMS | Validated |
| RP-15 | Reporting | Plan Management | Oracle BI | Send notification of Change in Enrollment Availability to CMS | Validated |



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|---|---|---|---|---|---|
| RP-16 | Reporting | Plan Management | Oracle BI | Provide the ability the plan information on the public exchange view, including data such as:<br>- Plan title and description<br>- Plan quality rating<br>- Plan providers<br>- Out of pocket limits<br>- Annual deductible<br>- Doctor Choice<br>- Prescription Choice<br>- Monthly Premium<br>- Applicants Denied<br>- Plan Details - to be determined<br>- Link to Issuer/Plan website<br>- Medical loss ratio<br>- Transparency in coverage<br>- Summary in benefits and coverage<br>- Levels of coverage<br>- Availability of in-network and out-of-network providers | Validated |
| RP-17 | Reporting | Plan Management | Oracle BI | Provide periodic report to the Federal Data Services Hub to submit required data to CMS, but not limited to:<br>- Issuer data<br>- Plan data including<br>- Benefits structure<br>- rates<br>- enrollment | Validated |
| RP-18 | Reporting | Plan Management | CGI Plan Management | The system must provide a compliance dashboard to indicate compliance analysis progress on Issuers/plans and the results of the compliance analysis through the compliance process | Deleted |
| RP-19 | Reporting | Plan Management | Oracle BI | The system must provide a Issuer performance indicator dashboard to aggregate performance data and display summary performance information by Issuer/Plan | Deferred |



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| Ref Code | Category | Sub Category | Application or Module | Requirement Description "The system shall..." | Current Disposition |
|---|---|---|---|---|---|
| RP-20 | Reporting | Plan Management | CGI Plan Management | Provide interface/query to Federal Data Services Hub to return data about an Issuer - data could include:<br>- Premium review results<br>- Complaints<br>- Rates of app denial<br>- Claims processing timeliness<br>- Claims denials<br>- Quality reporting | Validated |
| RP-21 | Reporting | Plan Management | CGI Plan Management | Reporting on historical plan acceptance criteria | Validated |
| RP-22 | Reporting | Plan Management | CGI Plan Management | Retain and report on periodic historical plan quality ratings as determined by the Exchange. | Validated |
| RP-23 | Reporting | Plan Management | CGI Plan Management | The system must be able to display a variety of data about a plan to help determine the decision to renew including:<br>- Issuer Performance Data<br>- Quality Data<br>- Complaint Data<br>- Coverage data<br>- Benefits and rates | Validated |
| RP-24 | Reporting | Plan Management | Siebel Public Sector CRM | The system must be able to track and manage complaints and consumer feedback about Issuers filed through the Exchange. | Validated |
| RP-25 | Reporting | Plan Management | Siebel Public Sector CRM | The system must report on Exchange user complaint data on a periodic basis. Complaint data can include:<br>- Issuer<br>- Number of complaints<br>- Complaint type<br>- Complaint description/detail | Validated |
| SH-131 | Small Business | Update Employee Application | OneGate | Report employer contact information changes to the Issuer. | Validated |
| SH-194 | Small Business | Employee Enrollment in QHP | OneGate | Prepare a communication to Issuer regarding employee enrollment in QHP | Validated |
| SH-197 | Small Business | Employee Enrollment in QHP | OneGate | Provide notification to CMS regarding employee enrollment | Validated |



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| Ref Code | Category | Sub Category | Application or Module | Requirement Description "The system shall..." | Current Disposition |
|---|---|---|---|---|---|
| SH-205 | Small Business | Disenroll Employee in QHP | OneGate | Prepare a notice to CMS with a minimum data set of information regarding an employee's disenrollment from a qualified health plan through the Exchange. This information is used for tax administration, as applicable. | Validated |
| SH-210 | Small Business | Disenroll Employee in QHP | OneGate | If an employee has an involuntary disenrollment through the Exchange, prepare communication to the Issuer to terminate the employee. | Validated |
| SH-212 | Small Business | Disenroll Employee in QHP | OneGate | Prepare a notice to CMS with a minimum dataset of information regarding an employee's termination from a qualified health plan through the Exchange. This information is used for tax administration, etc., as applicable. | Validated |
| SH-232 | Small Business | Change Reporting | 3rd Party Premium Processor | Prepare and send monthly report to employer with the insurance bill, indicating changes to their employee enrollment list. Some of these changes will result from the employee's reporting of Qualifying Events. | Validated |
| SH-236 | Small Business | Change Reporting | 3rd Party Premium Processor | Report employee contact information changes to the Issuer. | Validated |
| WP-50 | Web Portal | User Customization | OneGate | Provide a dashboard of key information and metrics for "super users" including electronic notice posting area. | Validated |
| NO-1 | Notification | UX | OneGate | Users of the Exchange Web portal can view the history of all communication between the Exchange and the individual online | Validated |
| NO-2 | Notification | Notification Engine | Thunderhead NOW | Provide the capability to target noticing at a family/household or individual level | Validated |
| NO-3 | Notification | Notification Engine | Thunderhead NOW | Support the message body in a variety of formats including, but not limited to text, RTF, or HTML | Validated |
| NO-4 | Notification | Notification Engine | Thunderhead NOW | Provide the capability to pass parameters to both the title and the body of the notification | Validated |
| NO-5 | Notification | Notification Engine | Thunderhead NOW | Include graphics capability for notifications | Validated |
| NO-6 | Notification | Notification Engine | Thunderhead NOW | Enforce size requirements on messages as defined by the Exchange | Validated |
| NO-7 | Notification | Notification Engine | Thunderhead NOW | Recognize "opt-out" flags attached to individual records and suppress notifications to those individuals | Validated |



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|---|---|---|---|---|---|
| NO-8 | Notification | Notification Engine | Thunderhead NOW | Recognize and "invalid e-mail" flag and suppress notifications to those addresses | Validated |
| NO-9 | Notification | Notification Engine | Thunderhead NOW | Filter out and suppress live e-mails for notification test instances | Validated |
| NO-10 | Notification | Notification Engine | Thunderhead NOW | Assign a notification ID (notification event) and include on all messages as determined by the Exchange | Validated |
| NO-11 | Notification | Notification Engine | Thunderhead NOW | Support barcoding of outgoing notifications | Validated |
| NO-12 | Notification | Notification Engine | Thunderhead NOW | Provide the capability to include both dynamic and static attachments | Validated |
| NO-13 | Notification | Notification Engine | Thunderhead NOW | Allow for embedded links within notification message | Validated |
| NO-14 | Notification | Notification Engine | Thunderhead NOW | Provide tools to manage e-mail "bouncebacks", including the ability to parse the "bounceback" message for actions | Validated |
| NO-15 | Notification | Notification Engine | Thunderhead NOW | Provide the capability to include the message ID in the notification subject line | Validated |
| NO-16 | Notification | Financial Management | Premium Processor / OneGate / other options | Notify Employer of Payment Discrepancy | Duplicate |
| NO-17 | Notification | Financial Management | Premium Processor / OneGate / other options | Provide Invoices to Individuals | Duplicate |
| NO-18 | Notification | Financial Management | Premium Processor / OneGate / other options | Provide notifications to employees of payment discrepancy from Small Business | Duplicate |
| NO-19 | Notification | Financial Management | Premium Processor / OneGate / other options | Provide notification to individuals of payment discrepancy from Exchange | Duplicate |
| NO-20 | Notification | Financial Management | Premium Processor / OneGate / other options | The Issuer invoice will be generated and a Notification sent to the Issuer. | Deleted |



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|---|---|---|---|---|---|
| NO-21 | Notification | Financial Management | Premium Processor / OneGate / other options | Communicate to the Exchange of the discrepancy. | Duplicate |
| NO-22 | Notification | Financial Management | Premium Processor / OneGate / other options | Send notification of unpaid premiums to employers. | Duplicate |
| NO-23 | Notification | Financial Management | Premium Processor / OneGate / other options | The invoice notification would include a link to login to the Exchange and make an electronic payment. | Duplicate |
| NO-24 | Notification | Eligibility and Enrollment | OneGate | Produce a mailed, written notice to the individual to provide additional verifications; the automated written notice shall include:<br>- Individual name<br>- Address<br>- Unique identifier<br>- Information requested<br>- Due date based on date of initial application | Validated |
| NO-25 | Notification | Eligibility and Enrollment | OneGate | Send notification for change in individual's Eligibility Status | Validated |
| NO-26 | Notification | Eligibility and Enrollment | OneGate | When additional verification is required, provide on-screen notification to individual to supply additional verifications through the exchange. | Validated |
| NO-27 | Notification | Eligibility and Enrollment | OneGate | Generate on-screen notification to individuals who select at Tax Credit Advance of the possibility of tax penalties / liabilities at time of tax filing should their annual income increase. | Duplicate |
| NO-28 | Notification | Eligibility and Enrollment | Premium Processor / OneGate / other options | Prepare an electronic, real-time transmission of information necessary in order for the qualified health plan issuer to provide a welcome package and identification card to the individual and to implement advance premium tax credits and cost-sharing reductions, as applicable. | Duplicate |



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|---|---|---|---|---|---|
| NO-29 | Notification | Eligibility and Enrollment | OneGate | Generate communication to individual requesting additional documentation to support his/her attestation of annual / monthly income. This should only occur when the Exchange is not able to verify income via authoritative sources. | Validated |
| NO-30 | Notification | Eligibility and Enrollment | OneGate | Prepare and provide communication to individuals about a mid-year plan decertification and notify need for plan selection / enrollment. | Validated |
| NO-31 | Notification | Eligibility and Enrollment | OneGate | Prepare written and on-screen notification to individuals regarding eligibility for enrollment periods. | Validated |
| NO-32 | Notification | Eligibility and Enrollment | Premium Processor / OneGate / other options | Prepare an electronic notice to CMS with a minimum dataset of information regarding an individual's enrollment in a qualified health plan through the Exchange. This information is used to generate payments to qualified health plan issuers for advance premium tax credits and cost-sharing reductions, as well as for performance measurement and tax administration, as applicable. | Duplicate |
| NO-33 | Notification | Eligibility and Enrollment | Premium Processor / OneGate / other options | Provide notification to the issuer of an individual's selected qualified health plan regarding changes to the individual's information, including to his or her levels of advance premium tax credits or cost-sharing reductions, or regarding a decision by an individual to renew his or her enrollment in the qualified health plan. | Duplicate |
| NO-34 | Notification | Eligibility and Enrollment | Oracle BI | Notify CMS regarding reconciled periodic enrollment information. This information is used to generate payments to qualified health plan issuers for advance premium tax credits and cost-sharing reductions, as well as for performance measurement and tax administration, as applicable. | Validated |
| NO-35 | Notification | Eligibility and Enrollment | OneGate | If an individual initiates a voluntary disenrollment through the Exchange and not directly with the Issuer, produce an electronic notification to the Issuer to disenroll an individual. | Validated |



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|---|---|---|---|---|---|
| NO-36 | Notification | Eligibility and Enrollment | Premium Processor / OneGate / other options | Prepare a notice to CMS with a minimum dataset of information regarding an individual's disenrollment from a qualified health plan through the Exchange. This information is used to adjust payments to qualified health plan issuers for advance premium tax credits and cost-sharing reductions, as well as for performance measurement and tax administration, as applicable. | Validated |
| NO-37 | Notification | Eligibility and Enrollment | OneGate | Generate written and on-screen notification of the result of an individual's eligibility determination (including information such as individuals evaluated, MAGI used for basis of determination, period of eligibility, etc.) Notifications must align with currently established eligibility notices for Medicaid and CHIP. | Validated |
| NO-38 | Notification | Eligibility and Enrollment | OneGate | Provide electronic notification to CMS of the result of an individual's eligibility determination. | Duplicate |
| NO-39 | Notification | Eligibility and Enrollment | Siebel Public Sector CRM | Generate a notification to CMS of any completed appeals decisions. | Validated |
| NO-40 | Notification | Eligibility and Enrollment | OneGate | Send a formal, written notice to a individual's mailing address summarizing eligibility determination for individual exemption | Duplicate |
| NO-41 | Notification | Eligibility and Enrollment | OneGate | Send an automated transaction individuals who have been determined as exempt or not exempt to CMS | Validated |
| NO-42 | Notification | Eligibility and Enrollment | OneGate | Send a formal, written notice to a individual's mailing address summarizing eligibility determination for individual exemption | Duplicate |
| NO-43 | Notification | Small Business | OneGate | Upon submittal of initial Employer Application, provide email and written notification to employees (as identified on the employee roster) to elect for or opt-out of employer sponsored coverage. Notification should also provide instructions and information to the employee about the open enrollment period and SHOP website access. | Validated |
| NO-44 | Notification | Small Business | OneGate | Provide ability to generate on-screen and written notification to employers who select at Small Business Tax Credit of the possibility of tax penalties / liabilities at time of tax filing should their business size or income change. | Validated |



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|---|---|---|---|---|---|
| NO-45 | Notification | Small Business | OneGate | Produce a mailed, written notice to the employer to provide additional verifications; the automated written notice shall include:<br>- Employer name<br>- Address<br>- Unique identifier, potentially<br>- Employer EIN<br>- Information requested<br>- Due date based on date of initial application | Validated |
| NO-46 | Notification | Small Business | OneGate | If an employer has an involuntary termination through the Exchange, produce an electronic notification to the Issuer to terminate the employer. Also produce an electronic notification to the employer's employees to inform them of the employer termination. | Validated |
| NO-47 | Notification | Small Business | OneGate | Prepare a notice to CMS with a minimum dataset of information regarding an employer's involuntary termination from a qualified health plan through the Exchange. This information may be used for small business tax credits, as well as for individual mandates, etc., as applicable. | Validated |
| NO-48 | Notification | Small Business | OneGate | Produce written notification / request for employers to verify key eligibility factors (continue to has a current EIN, etc.) for the purposes of annual eligibility / participation renewal and report changes if necessary. | Validated |
| NO-49 | Notification | Small Business | OneGate | Produce a notice of annual open enrollment. | Validated |
| NO-50 | Notification | Small Business | OneGate | In all notices produced by the Exchange regarding eligibility determination, notify employers to their rights and responsibilities (including a right to appeal eligibility decisions). | Validated |
| NO-51 | Notification | Small Business | Siebel Public Sector CRM | Generate a formal written notice informing an employer of the details of an appeal decision. | Validated |
| NO-52 | Notification | Small Business | Siebel Public Sector CRM | Generate a notification to CMS of any completed appeals decisions. | Validated |
| NO-53 | Notification | Small Business | OneGate | Generate a notification to an employer regarding the employer's adjusted eligibility determination based on the employer's Exchange eligibility appeal decision. | Validated |



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|---|---|---|---|---|---|
| NO-54 | Notification | Small Business | OneGate | Produce a mailed, written notice to the employee to provide additional verifications; the automated written notice shall have the capability to include:<br>- Employee name<br>- Employee Address<br>- Social security number<br>- Other Employee Contact Information<br>- Employer Name<br>- Worksite Address<br>- Enrollees' dependent Information<br>- Information requested<br>- Due date based on date of initial application<br>- Unique identifier, if required | Validated |
| NO-55 | Notification | Small Business | OneGate | Generate written and on-screen notification of the result of an employee's eligibility determination | Validated |
| NO-56 | Notification | Small Business | OneGate | Produce an automated and real-time, electronic notification of plan selection. | Validated |
| NO-57 | Notification | Small Business | OneGate | If an employee initiates a voluntary disenrollment through the Exchange, produce an electronic notification to the employee's employer to inform them of the employee disenrollment. | Validated |
| NO-58 | Notification | Small Business | OneGate | If an employee initiates a voluntary disenrollment through the Exchange, produce an electronic notification to the Issuer to disenroll the employee. | Validated |
| NO-59 | Notification | Small Business | OneGate | Prepare a notice to CMS with a minimum dataset of information regarding an employee's disenrollment from a qualified health plan through the Exchange. This information is used for tax administration, as applicable. | Validated |
| NO-60 | Notification | Small Business | OneGate | If an employee has an involuntary disenrollment through the Exchange, produce an electronic notification to the employee to inform the employee of the employee disenrollment. | Validated |
| NO-61 | Notification | Small Business | OneGate | If an employee has a disenrollment through the Exchange, produce an electronic notification to the employee's employer to inform them of the employee termination and alternative insurance options. | Validated |



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|---|---|---|---|---|---|
| NO-62 | Notification | Small Business | OneGate | Produce written notification / request for employee to verify key eligibility factors for the purposes of annual eligibility / enrollment renewal and report changes if necessary. | Validated |
| NO-63 | Notification | Small Business | OneGate | Produce a notice of annual open enrollment. | Duplicate |
| NO-64 | Notification | Small Business | OneGate | Process notification notifying employer of coverage for employees. Also, communicate any next steps required by the employer. | Validated |
| NO-65 | Notification | Small Business | OneGate | Provide capability to generate a notification to CMS of any completed appeals decisions. | Duplicate |
| NO-66 | Notification | Small Business | OneGate | Generate a notification to an employee regarding the employee's adjusted eligibility determination based on the employee's Exchange eligibility appeal decision. | Validated |
| NO-67 | Notification | Small Business | OneGate | Prepare and send communication to the employer regarding changes to the Employer's worksite locations. | Validated |
| NO-68 | Notification | Small Business | OneGate | Prepare and send communication to the employer regarding changes to the employer's employee roster. | Validated |
| NO-69 | Notification | Small Business | OneGate | Prepare and send communication to the employee regarding changes to the Employee contact information. | Validated |
| NO-70 | Notification | Small Business | OneGate | Report employee contact information changes to the Issuer. | Validated |
| NO-71 | Notification | Small Business | OneGate | Prepare and send communication to the employee regarding changes to the employee's account due to a Qualifying Event. | Validated |
| NO-72 | Notification | Small Business | OneGate | Prepare and send monthly report to employer with the insurance bill, indicating changes to their employee enrollment list. Some of these changes will result from the employee's reporting of Qualifying Events. | Validated |
| NO-73 | Notification | Small Business | OneGate | Process notification notifying employer of coverage for employees. Also, communicate any next steps required by the employer. | Duplicate |
| NO-74 | Notification | Plan Management | CGI Plan Management | Provide the ability to generate letter of denial indicating that an Issuer and/or Plan has not been accepted into the Exchange | Deleted |
| NO-75 | Notification | Plan Management | CGI Plan Management | Produce electronic and paper notices for Issuers indicating the results of the compliance and quality reviews, i.e. the compliance and quality rating determination | Deferred |



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| Ref Code | Category | Sub Category | Application or Module | Requirement Description "The system shall..." | Current Disposition |
|---|---|---|---|---|---|
| NO-76 | Notification | Plan Management | CGI Plan Management | Produce electronic and paper notices to Issuers when a plan is not renewed to be in the Exchange | Deleted |
| NO-77 | Notification | Plan Management | CGI Plan Management | Upon request, generate and send renewal request to Issuers about the plans desired to be renewed, requesting a notification of intent to renew. | Deleted |
| NO-78 | Notification | Plan Management | CGI Plan Management | Upon request, generate and send non-renewal notices to Issuers about the plans not be renewed. | Deleted |
| NO-79 | Notification | Plan Management | CGI Plan Management | Upon request, generate and send electronic decertification notices to Issuers about the plans to be decertified. | Deleted |
| NO-80 | Notification | Plan Management | CGI Plan Management | Upon request, generate and send letter (mail) decertification notices to Issuers about the plans to be decertified. | Deleted |
| NO-81 | Notification | Plan Management | CGI Plan Management | Provide the ability to send electronic notification to the Insurance Division about a non-renewal or decertification of a plan. | Deleted |
| NO-82 | Notification | Plan Management | CGI Plan Management | Provide the ability to send electronic notification to the appropriate CMS system for plan management and fiscal management functions about a non-renewal or decertification of a plan. | Validated |
| NO-83 | Notification | Plan Management | CGI Plan Management | Recertify the plan and notify issuers consistent with the initial certification process. | Deleted |
| NO-84 | Notification | Plan Management | CGI Plan Management | Update CMS with plan certified plan information consistent with the initial certification process | Validated |
| NO-85 | Notification | Plan Management | CGI Plan Management | Upon rate approval, send updated plan/rate/benefit data to the appropriate CMS system for plan management and fiscal management functions for determination of silver plans. | Validated |
| NO-86 | Notification | Plan Management | CGI Plan Management | If a rate increase is denied, generate a denial notice to the issuer both electronically, and as a formal notice that can be mailed. | Deleted |
| NO-87 | Notification | Plan Management | CGI Plan Management | If a rate increase is approved, generate an approval notice to the issuer both electronically, and as a formal notice that can be mailed. | Deleted |
| NO-88 | Notification | Plan Management | CGI Plan Management | Screen submitted rate and benefit data and provide formatting error information back to the Issuer if data format is not correct | Deleted |
| NO-89 | Notification | Plan Management | CGI Plan Management | Provide the ability to provide submitted rate and benefit data to the Insurance Division system electronically | Deleted |



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|---|---|---|---|---|---|
| NO-90 | Notification | Plan Management | CGI Plan Management | Registered Navigators/Brokers must be able to subscribe to Exchange notifications | Validated |
| NO-91 | Notification | Plan Management | CGI Plan Management | Produce electronic or paper notices for Issuers indicating the results of the compliance and quality reviews, i.e. the compliance and quality rating determination | Duplicate |
| NO-92 | Notification | Plan Management | CGI Plan Management | Produce electronic or paper notices to Issuers when a plan is not renewed to be in the Exchange | Duplicate |
| NO-93 | Notification | Plan Management | CGI Plan Management | Produce electronic or paper notices to Issuers when a plan is not decertified from Exchange | Deleted |
| NO-94 | Notification | Plan Management | CGI Plan Management | Record the plan or issuer decertification event and status information, including date, reason/rationale. | Deleted |
| NO-95 | Notification | Plan Management | CGI Plan Management | Produce electronic notification to the Insurance Division when a Issuer/plan is not renewed or is decertified from the Exchange | Deleted |
| NO-96 | Notification | Plan Management | CGI Plan Management | Produce electronic notification to CMS when an Issuer/plan is not renewed or is decertified from the Exchange | Validated |
| NO-97 | Notification | Plan Management | CGI Plan Management | Generate and send renewal request to Issuers about the plans desired to be renewed, requesting a notification of intent to renew. | Duplicate |
| NO-98 | Notification | Plan Management | CGI Plan Management | Upon request, generate and send non-renewal notices to Issuers about the plans not be renewed. | Duplicate |
| NO-99 | Notification | Plan Management | CGI Plan Management | Upon request, generate and send electronic decertification notices to Issuers about the plans to be decertified. | Duplicate |
| NO-100 | Notification | Plan Management | CGI Plan Management | Upon request, generate and send letter (mail) decertification notices to Issuers about the plans to be decertified. | Duplicate |
| NO-101 | Notification | Plan Management | CGI Plan Management | Provide the ability to send electronic notification to the Insurance Division about a non-renewal or decertification of a plan. | Duplicate |
| NO-102 | Notification | Plan Management | CGI Plan Management | Provide the ability to send electronic notification to the appropriate CMS system for plan management and fiscal management functions about a non-renewal or decertification of a plan. | Duplicate |
| NO-103 | Notification | Plan Management | CGI Plan Management | Generate re-amendment notification and information storage consistent with the initial certification amendment process. | Deferred |
| NO-104 | Notification | Plan Management | CGI Plan Management | Update CMS with plan certified plan information consistent with the initial certification process | Duplicate |



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|---|---|---|---|---|---|
| NO-105 | Notification | Plan Management | CGI Plan Management | Provide notices to be sent to plan consumers if a provider network change requires consumer notification. | Deleted |
| NO-106 | Notification | Plan Management | CGI Plan Management | Notify authorized Exchange users when an Issuer has updated any Issuer, plan and provider data | Deleted |
| NO-107 | Notification | Plan Management | CGI Plan Management | Authorized Exchange users must automatically receive notification that an enrollment request has been received. | Deleted |
| NO-108 | Notification | Plan Management | CGI Plan Management | Generate an electronic notification to the Insurance Division indicating the plan enrollment status upon approval of the enrollment change request. | Deleted |
| NO-109 | Notification | Plan Management | CGI Plan Management | Approval of the enrollment change request must generate an electronic notification to Exchange issuers indicating the plan enrollment status | Validated |
| NO-110 | Notification | Plan Management | CGI Plan Management | Approval of the enrollment change request must generate an electronic notification to registered Navigators/Brokers indicating the plan enrollment status | Validated |
| NO-111 | Notification | Plan Management | CGI Plan Management | Approval of the enrollment change request must send an update transaction to the appropriate CMS system for plan management and fiscal management functions indicating the plan enrollment status change and other information required by CMS | Validated |
| NO-112 | Notification | Plan Management | CGI Plan Management | Approval or disapproval of the enrollment change request must send notification to the requesting Issuer. | Validated |
| PM-175 | Plan Management | Process Change in Plan Enrollment Availability | Manual | Provide automatic notification to authorized Exchange users indicating that an enrollment request has been received. | Duplicate |
| PM-178 | Plan Management | Process Change in Plan Enrollment Availability | Manual | Upon approval of the enrollment change request, generate an electronic notification to Exchange Issuers indicating the plan enrollment status | Duplicate |



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|---|---|---|---|---|---|
| PM-179 | Plan Management | Process Change in Plan Enrollment Availability | TBD | Upon approval of the enrollment change request, generate an electronic notification to registered Navigators/Brokers indicating the plan enrollment status | Duplicate |
| PM-181 | Plan Management | Process Change in Plan Enrollment Availability | Manual | Upon approval or disapproval of the enrollment change request, generate notification to the requesting Issuer. | Duplicate |
| CAG-18 | Consumer Assistance | Complaints / Appeals | Siebel Public Sector CRM | The system shall provide notifications to the appropriate parties upon the following key events in the complaint/appeal process:<br>- Receipt of complaint/appeal<br>- Status Change<br>- Resolution | Validated |
| SH-122 | Small Business | Appeal Small Business Eligibility Decision | OneGate | Generate a notification to CMS of appeals decisions in which a renewal is denied. | Validated |
| SH-126 | Small Business | Periodic Reporting and Reconciliation | OneGate | Prepare and send communication to the employer regarding changes to the employer's employee roster. | Validated |
| SH-128 | Small Business | Change Reporting/Periodic Reporting | OneGate | Provide capability to prepare and send information-only communication to the employer regarding potential changes to their Tax Credit Eligibility due to a change in the employee roster. Provide a link to IRS website for additional information regarding the Small Business Tax Credit. | Deferred |
| SH-132 | Small Business | Update Employee Application | OneGate | Prepare and send communication to the employer regarding changes to the Employer contact information. | Validated |
| SH-136 | Small Business | Renew / Redetermine Employer Participation | OneGate | Provide notification to employers when annual election period is approaching | Validated |



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|---|---|---|---|---|---|
| SH-137 | Small Business | Renew / Redetermine Employer Participation | OneGate | Provide an immediate message to the employer warning about likely termination if they provide a primary worksite location or principal business address that is outside of the state. | Deleted |
| SH-140 | Small Business | Renew / Redetermine Employer Participation | OneGate | Prepare and send communication to the employer regarding changes to the Employer's worksite locations. | Validated |
| SH-150 | Small Business | Determine Employee Eligibility | OneGate | Inform employees that may be eligible for subsidized coverage at a lower premium and allow for an individual eligibility determination. | Validated |
| SH-191 | Small Business | Employee Selects QHP | OneGate | Produce an automated and real-time, electronic notification of plan selection. | Validated |
| SH-196 | Small Business | Employee Enrollment in QHP | OneGate | Provide notification of successful enrollment to employee | Validated |
| SH-200 | Small Business | Disenroll Employee in QHP | OneGate | If an employee initiates a voluntary disenrollment through the Exchange, produce an electronic notification to the employee's employer to inform them of the employee disenrollment. | Validated |
| SH-201 | Small Business | Disenroll Employee in QHP | OneGate | If an employee initiates a voluntary disenrollment through the Exchange, produce an electronic notification to the Issuer to disenroll the employee. | Validated |
| SH-207 | Small Business | Disenroll Employee in QHP | OneGate | If an employee has a disenrollment through the Exchange, produce an electronic notification to the employee's employer to inform them of the employee termination and alternative insurance options. | Validated |
| SH-208 | Small Business | Disenroll Employee in QHP | OneGate | If an employee has an involuntary disenrollment through the Exchange, produce an electronic notification to the employee to inform the employee of the employee disenrollment. | Duplicate |
| SH-213 | Small Business | Renew Employee QHP Participation | OneGate | Provide automatic renewal notice to employees | Validated |



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|---|---|---|---|---|---|
| SH-217 | Small Business | Update Employee Application / Renew Employee QHP Participation | OneGate | Produce written notification / request for employee to verify key eligibility factors for the purposes of annual eligibility / enrollment renewal and report changes if necessary. | Validated |
| SH-219 | Small Business | Renew Employee QHP Participation | OneGate | Produce a notice of annual open enrollment. | Validated |
| SH-220 | Small Business | Renew Employee QHP Participation | OneGate | Produce notification to employees regarding the number of days left for open enrollment. | Validated |
| SH-233 | Small Business | Change Reporting | OneGate | Prepare and send communication to the employee regarding changes to the employee's account due to a Qualifying Event. | Validated |
| SH-237 | Small Business | Change Reporting | OneGate | Prepare and send communication to the employee regarding changes to the Employee contact information. | Validated |
| EL-16 | Eligibility and Enrollment | Individual Exemption from Responsibility | OneGate | Send real-time, automated notifications and written notices to Individuals of CMS determinations of exemption status, and update individual accounts accordingly. | Validated |
| EL-17 | Eligibility and Enrollment | Individual Application & Submit Update | OneGate | Provide the ability to generate online and written notification of the result of an Individual's eligibility determination, including the basis for denial if denied coverage. | Validated |
| EL-22 | Eligibility and Enrollment | Individual Application & Submit Update | CGI | Send notifications to the Individuals regarding the enrollment process and the status of their application. | Validated |
| EL-20 | Eligibility and Enrollment | Individual Application & Submit Update | CGI | Send notifications to the Individuals who have not completed their applications informing them of the expiration date. | Validated |



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|---|---|---|---|---|---|
| EL-19 | Eligibility and Enrollment | Individual Application & Submit Update | OneGate | Send notifications to the Individuals, alerting them to submit required eligibility or verification information. | Duplicate |
| EL-21 | Eligibility and Enrollment | Individual Application & Submit Update | OneGate | Send notifications to the Individuals, Exchange Staff, Brokers, and Navigators of changes to Individuals' applications. | Validated |
| EL-51 | Eligibility and Enrollment | Participation in the Exchange | OneGate | Produce an immediate on-screen notification of a positive incarceration data match, and allow the Individual of ability to provide alternate documentation or an attestation of incarceration status. | Validated |
| EN-8 | Eligibility and Enrollment | Plan Selection | OneGate | Generate written notification to individuals who select at Tax Credit Advance of the possibility of tax penalties / liabilities at time of tax filing should their annual income increase. | Validated |
| EN-34 | Eligibility and Enrollment | Enrollment | OneGate | Prepare written notification to individuals regarding eligibility for enrollment periods. | Duplicate |
| EL-56 | Eligibility and Enrollment | Individual Eligibility Determination-Verification | OneGate | Generate online or written requests to Individuals for additional documentation and allow electronic submission of documents, link to accounts, and track follow up activities. | Validated |
| WP-1 | Web Portal | Design | OneGate | Design based on Enrollment 2014 UX project | Met |
| WP-2 | Web Portal | Design | OneGate | Provide content specific help on screen for users | Met |
| WP-3 | Web Portal | Design | OneGate | Provide additional language support features. At a minimum, the system should provide language "flag" icons to direct consumes in their native language to Navigator and/or Translation services | Validated |
| WP-4 | Web Portal | Design | Siebel Public Sector CRM | Persist telephone support options on all Portal views | Met |
| WP-4A | Web Portal | Design | Siebel Public Sector CRM | Persist live chat support options on all Portal views | Deferred |
| WP-5 | Web Portal | Design | OneGate | Provide trained business user portal content management capabilities | Met |
| WP-6 | Web Portal | General | OneGate | Display general information about the state's health and human services programs publicly for all users to view without requiring a login. | Validated |



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| Ref Code | Category | Sub Category | Application or Module | Requirement Description "The system shall..." | Current Disposition |
|---|---|---|---|---|---|
| WP-7 | Web Portal | General | OneGate | Display and provide browsing capabilities on the various health options and plans available to users without requiring a login. | Validated |
| WP-8 | Web Portal | General | OneGate | Provide robust search capability for information contained on the portal without requiring a login. | Met |
| WP-9 | Web Portal | General | OneGate | Provide capability for users to search for Navigators using a variety of criteria without requiring a login. | Validated |
| WP-10 | Web Portal | General | OneGate | Provide information on the procedures, including materials that will be needed to complete the application process for signing up for health coverage without requiring a login. | Validated |
| WP-11 | Web Portal | General | OneGate | Provide users (including authorized representatives) the option to complete a pre-screening of potential eligibility for state health and human services programs via a configurable module. | Met |
| WP-12 | Web Portal | General | OneGate | Provide an expedited expert level pre-screening function to Navigators, brokers, call center staff, and caseworkers. | Validated |
| WP-13 | Web Portal | General | OneGate | Accept input from Navigators, caseworkers, Call Center staff and customers necessary for pre-screening. | Validated |
| WP-14 | Web Portal | General | OneGate | Display the results of the pre-screening assessment of eligibility to Navigators, caseworkers, call center staff, and customers. | Validated |
| WP-15 | Web Portal | General | OneGate | Provide the ability to flag any information or situations that require more detailed information and direct individuals for further assistance. | Validated |
| WP-16 | Web Portal | General | OneGate | Support additional data-gathering regarding user experience with QHPs and/or quality of care (i.e. surveys, questionnaires, etc.) | Validated |
| WP-17 | Web Portal | Identity | OneGate | Provide unverified exchange web portal login/accounts - Enable user to save information and return to the site without giving 'official' identity verification data (e.g. SSN, name, etc.) | Met |
| WP-18 | Web Portal | Identity | OneGate | Provide verified Exchange web portal login/accounts with appropriate system access according to system assigned role (e.g. consumer, Navigator, Issuer, etc.) - Verified accounts are those for whom the individual identity has been verified through an authoritative source (i.e. SSN validation) | Met |



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| Ref Code | Category | Sub Category | Application or Module | Requirement Description "The system shall..." | Current Disposition |
|---|---|---|---|---|---|
| WP-19 | Web Portal | Enrollment | OneGate | Enable individual users to self declare income information for use in plan comparison. Persist this information for later sessions if the user has created an Exchange Web Portal account | Validated |
| WP-20 | Web Portal | Enrollment | OneGate | Enable individual users to compare plans based on factors such as<br>-Premium/Expense (Monthly Cost, Annual Out of pocket expense, Monthly premium)<br>- Carrier<br>- Plan type (HMO, PPO, POS, PCCM)<br>- Product Type (e.g. Vision, Dental, etc.<br>- Quality Rating (0 - 4) | Met |
| WP-20a | Web Portal | Enrollment | OneGate | Enable individual users to compare plans based on factors such as<br>- Medal Rating<br>- Benefit Structure<br>- Member-provided feedback rating | Deferred |
| WP-21 | Web Portal | Enrollment | OneGate | Provide multiple summary and detail levels of plan comparison information | Met |
| WP-22 | Web Portal | Enrollment | OneGate | Enable users to look up the providers that are affiliated with specific plans and affiliation type (i.e. Tiered PPO model). | Validated |
| WP-23 | Web Portal | Enrollment | Plan Management | Provide ability for Issuers to upload supporting documentation to the plan selection tool | Validated |
| WP-24 | Web Portal | Enrollment | OneGate | Provide a plan selection recommendation engine or wizard that can filter initial results based upon additional user preference and input. | Validated |
| WP-25 | Web Portal | Enrollment | OneGate | Provide capability for users to download additional supporting plan documentation as provided by the Issuer | Validated |
| WP-26 | Web Portal | Enrollment | OneGate | Provide calculator functionality for individuals to estimate their premiums including potential premium tax credit subsidies and cost sharing reductions | Validated |
| WP-27 | Web Portal | Eligibility | OneGate | Provide a dynamic application entry engine to collect information required to determine eligibility for health and human service programs. The system shall tailor the application process based upon user response to questions. | Met |



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| Ref Code | Category | Sub Category | Application or Module | Requirement Description "The system shall..." | Current Disposition |
|---|---|---|---|---|---|
| WP-28 | Web Portal | Eligibility | OneGate | Provide a progress bar to show users where they are in the application process | Met |
| WP-29 | Web Portal | Eligibility | OneGate | Enable individual users to submit information for eligibility, for example:<br>- SSN<br>- Address<br>- Date of birth<br>- Name<br>- Household income | Met |
| WP-30 | Web Portal | Eligibility | OneGate | Provide status of eligibility request received from the eligibility service | Validated |
| WP-31 | Web Portal | Eligibility | OneGate | Display eligibility results received from the eligibility service | met |
| WP-32 | Web Portal | Eligibility | OneGate | Enable individual users to apply for benefits eligibility using alternate income verification (i.e. paper verification). | Validated |
| WP-33 | Web Portal | Enrollment | OneGate | Enable individual users to enroll in a plan which they have selected | Met |
| WP-34 | Web Portal | Enrollment | OneGate | Enable individual users to reenroll (renew) in a plan which they have selected | Validated |
| WP-35 | Web Portal | Financial Management | OneGate | Allow users to set up payment options for their selected plan(s) | Validated |
| WP-36 | Web Portal | Financial Management | OneGate | Allow users to make recurring and scheduled electronic premium payments through the Exchange portal | Validated |
| WP-37 | Web Portal | Financial Management | OneGate | Allow authorized users the ability to view their payment histories on the Web Portal | Validated |
| WP-38 | Web Portal | Small Business | OneGate | Enable Employer to set up SHOP plan selection(s) | Met |
| WP-39 | Web Portal | Small Business | OneGate | Enable Employees to compare available SHOP plans | Met |
| WP-40 | Web Portal | Small Business | OneGate | Enable Employees to enroll or unenroll in SHOP plan | Met |
| WP-41 | Web Portal | Small Business | OneGate | Allow employers to set up payment options for premiums | Validated |
| WP-42 | Mobile Web Portal | Enrollment, Financial Management | OneGate | Enable users of all plans to view their enrollment and payment status, plan details, and notification history | Met |



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| Ref Code | Category | Sub Category | Application or Module | Requirement Description "The system shall..." | Current Disposition |
|---|---|---|---|---|---|
| WP-43 | Mobile Web Portal | Eligibility | OneGate | Enable users to upload eligibility documents using their camera equipped mobile device | Deferred |
| WP-44 | Support Intranet | Security | OneGate | Provide role based access to Exchange Portal content | Met |
| WP-45 | Web Portal | Administration | OneGate | Provide role based portal administration function | Met |
| WP-46 | Web Portal | Financial Management | OneGate | View Invoice and invoice details for Individual, Employer and Issuers | Validated |
| WP-47 | Web Portal | Financial Management | OneGate | Make electric payment for Individual, Employer, and Issuer | Validated |
| WP-48 | Web Portal | Financial Management | OneGate | View notification history for Individuals, Employers, and Employees | Validated |
| WP-49 | Web Portal | User Customization | OneGate | Provide customizable portal views and functionality based on user role for "super users" (e.g. Navigator, Broker, caseworker, etc.) | Validated |
| WP-51 | Web Portal | User Customization | OneGate | Allow TPAs/QHP issuers to access the Exchange through a customized portal in order to add, manage, certify, recertify, and delete their health plans. | Deferred |
| WP-52 | Web Portal | User Customization | OneGate | Allow SHOP owners access to the Exchange through a custom portal and add or manage health plan options for their employees. | Met |
| WP-53 | Web Portal | User Customization | OneGate | Allow SHOP employees to access a custom portal where they can view and select among their plans options, enroll their family and manage changes in circumstances. | Met |



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# Statement of Work No. 4

This Statement of Work No. 4 ("**Statement of Work**" or "**SOW**") is issued pursuant to the Master Services Agreement first dated as of December 13, 2012, as amended February 28, 2013 and July __, 2013 (the "**MSA**") between State of Vermont ("**SOV**") and CGI Technologies and Solutions Inc. ("**Supplier**"). This Statement of Work incorporates the terms and conditions of the MSA as if the MSA were fully set forth in the text of this Statement of Work. Capitalized terms not defined in this Statement of Work are defined in the MSA.

Pursuant to Statement of Work No. 1 to the MSA, effective as of December 17, 2012, as amended ("**SOW #1**"), SOV and the Supplier agreed to develop and refine the scope of the hosting services to be delivered by Supplier under SOW #1. As a result of such scope refinement, SOV and Supplier agreed to separate the hosting services from the other IT Services being providing under SOW #1 and therefor as of the date hereof are amending and restating SOW #1 and entering into this SOW, pursuant to which the hosting services will be provided.

## 1. EFFECTIVE DATE AND TERM OF THIS STATEMENT OF WORK.

This Statement of Work is effective as of December 17, 2012 ("**Statement of Work Effective Date**") and shall continue through December 31, 2014, which shall constitute the "**Statement of Work Term**". The Statement of Work Term may be extended for up to two (2) one-year periods, at the option of SOV.

## 2. SERVICES TO BE PERFORMED AND SCHEDULE OF PERFORMANCE.

A. Scope of Services

The Supplier will provide IT Services based on the Non-Functional Requirement Traceability Matrix ("**Non-Functional RTM**") attached here as Schedule A to this SOW and incorporated herein by reference and as further described in Exhibit I, Exhibit D, Exhibit J and the MSA The Services provided under this SOW will be referred to as the "Hosting Services." Additional assumptions regarding the scope of the Hosting Services is provided in the three diagrams attached as Schedule B to this SOW and incorporated herein by reference. The Hosting Services will be provided in a CGI environment that conforms in all respects the requirements of the Non-Functional RTM and the MSA, except that SOV agrees that this environment is a shared service environment and not a dedicated hosting environment.

B. Location of Services.

Supplier provided Hosting Services will be located at the followingdata center sites.

| | | |
|---|---|---|
| Primary | CGI Phoenix Data Center | 10007 South 51st Street<br>Phoenix, AZ 85044 |
| Secondary | CGI Philadelphia Data Center | 3rd floor hosting - CGI Technologies.<br>1500 Spring Garden St<br>Philadelphia, PA 19130 |

C. Deliverables and Work Product.

Upon Go-Live of the System (as defined in Exhibit D), Supplier will provide a monthly report of the Service Level Agreement results as detailed in Exhibit D. Additional details regarding Work Product are documented in the SOW#1 Project Management Plan ("**PMP**").

D. Milestone Schedule

Supplier will provide the Hosting Services in accordance with the timeframes set forth in the Baseline Schedule documented in the PMP. A list of Critical Milestones subject to liquidated damages is included in Exhibit C.

E. Acceptance Criteria and Process.

The acceptance criteria for Hosting Services is set forth in the PMP.

F. Supplier Personnel.

Operations Manager, Robert Carlin is Key Personnel. The process for approval of Supplier Personnel in Key Supplier Positions is described in the MSA.

G. Supplier Resources.

Description of Supplier Resources is set forth in the PMP.

H. SOV Roles and Responsibilities.[1]

1. The SOV is responsible for appointing a dedicated full-time SOV resource to establish and manage a team to work with Supplier in connection with the Hosting Services and provide for timely completion of the SOV's responsibilities.
2. The Department of Vermont Health Access, in conjunction with Department of Information and Innovation (DII) and Agency of Human Services (AHS)-IT, is responsible for facilitating the participation of other State agencies and insurance carrier staff as required for the operation of State of Vermont agency interfaces and insurance carrier interfaces.
3. The SOV is responsible for providing space and furnishings in an SOV facility for an agreed upon number of Supplier Personnel. Supplier is responsible for providing computer equipment needed for its staff.
4. The SOV will provide badge access for agreed upon Supplier Personnel to identified locations for the Statement of Work Term as long as such Supplier Personnel subject to the terms and conditions of the MSA, including without limitation that such Supplier Personnel meet the SOV security requirements necessary to provide a badge.
5. The SOV will provide wireless, internet connectivity to agreed upon Supplier Personnel staff at the SOV site.
6. Proprietary Materials: SOV will provide licenses for Oracle products to be implemented on SOV's behalf in the Hosting Services for the Exchange.[2]

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I. Governance Structure, Meetings and Reports.
Governance Structure, Operation and Executive level meeting process and weekly status report standards will occur as set forth in the PMP.

J. Termination for Convenience.
Notwithstanding Section 26.3 of the MSA, at any time prior to the date fifteen (15) days after executing this SOW 2, SOV shall have the right to terminate this Statement of Work, in whole or in part, for convenience and without cause by providing Supplier with not less than fifteen (15) days prior written notice. Upon any such termination, SOV shall have no liability other than to (i) pay Supplier Charges for Services rendered up to and including the effective date of termination; and (ii) reimburse Supplier for Pass-Through Expenses incurred by Supplier, if any, to procure Software or Hardware for SOV pursuant to Section 6 and 7 below, or as approved by SOV pursuant to a Change Order. In the event of a termination in part, Charges will be adjusted in accordance with Section 26.4.

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**3. PROJECT MANAGERS.**

The Operations Manager (as defined in Section F above) is the Project Manager for this SOW.

---

**4. STAFF.**

A. Subcontractors.
Supplier has engaged Exeter Consulting (and its affiliates) to configure the OneGate product. Supplier has engaged Oracle Consulting Services to configure the Oracle products. The scope of the subcontractor configuration work is set forth in the PMP and the RTM.

---

**5. SOFTWARE.**

A. Third Party Software provided by Supplier
Subject to the terms and conditions of the MSA, Supplier will procure the Third Party Software for SOV (the licenses for which will be directly between Supplier and the respective third party vendor) listed as Third Party Software in Exhibit L (Pricing) in Section 5.2.9.4 of Part 2.

B. Third Party Software provided by SOV.

---

SOV will provide licenses for Oracle products and will pay maintenance on those Oracle products during the term of the SOW.

**6. HARDWARE.**

At no additional charge to SOV, Supplier is responsible for the procurement, operation and maintenance of all Equipment used by or for the benefit of SOV in connection with the Hosting Services or used by or for the benefit of Supplier to provide or support the provision of the Hosting Services.

**7. THIRD PARTY CONTRACTS.**

Not applicable to this SOW

**8. SERVICE LEVELS.**

The Service Levels and Service Level Credits in Exhibit D attached to the MSA apply to the Hosting Services.

**9. SECURITY, DISASTER RECOVERY, BUSINESS CONTINUITY PROCEDURES, CONTROLS**

As required by the MSA.

**10. FORECASTING**

Any forecasting needed is as set forth in in the PMP.

**11. FACILITIES TO BE PROVIDED BY SUPPLIER.**

Not applicable.

**12. ASSUMPTIONS.**

Not applicable to this SOW.

**13. OPTIONAL SERVICES.**

A. Not applicable to this SOW.

**14. OTHER SERVICES.**

A. Not applicable to this SOW

**15. CHARGES AND PASS-THROUGH EXPENSES.**

A. See Exhibit L (Cost) attached to the MSA.

**16. ADDITIONAL TERMS.**

A. Not applicable.

Agreed to and accepted by:

| CGI Technologies and Solutions Inc. (CGI) | State of Vermont |
|---|---|
| By:_____ | By:_____ |
| Name:_____ | Name:_____ |
| Title:_____ | Title:_____ |
| Date:_____ | Date:_____ |

SCHEDULE A

**Non-Functional RTM**

[see attached]

# SCHEDULE B

## Hosting Environments Diagrams

[see attached]

**State of Vermont Enterprise Architecture**
**Non-Functional Requirements Traceability Matrix (RTM)**
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| | H6 | Configuration Management | H6 Configuration | 10 |
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| Target Environment Review | ENV1 | see Production Environments Technical Architecture Model | [Hosting] VT HSEP HBE Environments - Physical and Virtual Architecture for Environments v3 05242013 MMorey.pdf | |
| | ENV2 | see Non-Production Environments Technical Architecture Model | [Hosting] VT HSEP HBE Environments - Physical and Virtual Architecture for Environments v3 05242013 MMorey.pdf | |
| WAN Connectivity | WAN1 | see WAN Connectivity Schematic | [Hosting] SOV WAN Network diagram 03_22_13 v6 - Chase ep pref vendor update.pdf | |

| Date | Author | Version | Change Reference |
|---|---|---|---|
| | Eric Stephens | v0.15 | Add additional requirements from Oracle Fusion Reference Architecture |
| 18-Dec-2012 | Eric Stephens | v0.16 | Merge HI/CGI NFRs |
| 19-Dec-2012 | Eric Stephens | v0.17 | Add hosting::governance items |
| 19-Dec-2012 | Eric Stephens | v0.18 | Add SLA tab |
| 2-Jan-2013 | Eric Stephens | v0.19 | Harvest previously stricken items as requirements; convert contract-like language to requirements |
| 2-Jan-2013 | Eric Stephens | v0.20 | Naming and categoriziation changes |
| 3-Jan-2013 | Eric Stephens | v0.21 | Separate catagories into tabs |
| 11-Jan-2013 | Eric Stephens | v0.24 | Move functional requirements to functional tab; add tab for candidate NFRs from Fx sheet and reviewed to see which were fx v. nfr. Reviewed Gartner tabs with additional requirements and consolidated. |
| 14-Jan-2013 | Eric Stephens, Rob Tornai, Rick Ketcham | v0.25 | consolidate categories/tabs, final review of non-Gartner NFRs. Separate Functional requirements |
| 15-Jan-2013 | Eric Stephens | v1.0 | Baseline. Add security punchlist tab, remove functional requirements tabs and redistributed to functional folks |
| 18-Jan-2013 | Eric Stephens | v1.1 | Add interfaces, data conversion, and hosting environments |
| 18-Jan-2013 | Eric Stephens | v1.2 | Add PCI as requirement in punchlist, add PCI tabs |
| 18-Jan-2013 | Eric Stephens | v1.3 | Add IRS 1075 Tab and individual requirements from IRS document |
| 18-Jan-2013 | Eric Stephens | v1.4 | Add Additional IRS 1075 to IRS 1075 tab |
| 21-Jan-2013 | MMOREY | v1.5 | 24 hours of cleanup. Ready for Chris Tanguay review on hosting and security |
| 23-Jan-2013 | MMOREY | V1.6 | Hosting and Solution Cleanup |
| 25-Jan-2013 | MMOREY | V2.0 | CGI Feedback on H1A, S1, S2A, S2B, S3, S4A, S4B, S5, S6, S7, S8 included |
| 26-Jan-2013 | MMOREY | V2.1 | Added Network WAN Schematic to TOC, SLN11 added Onegate, Thunderhead, Rightfax useage, Added SLN14 Actors (Trying to clarify what Actors interact with External DMZ, WAN, External Services versus Internal Services), CGI Feedback on SLN13 and SLN11 |
| 31-Jan-2013 | MMOREY | V3.0 | update all hosting sheets (H2-H13) from CGI feedback and approval(Eddy P.), updates SLN1-3 from CGI approval (Matt K.) Added modified(clearer) Interface NFR Sheet (SLN5 Interfaces), Added CGI comments to Actors SLN14. Add CMS Security Documentation required for CMS per CGI. |
| 14-Mar-2013 | MMOREY | V3.1 | Removed Y/N for clarity as these are non functional requirements. Unified/Clarified requirements where CGI had indicated they could meet but with exception. Modified WAN connectivity diagram to include premium processor. |
| 16-Apr-2013 | Chad Loseby | | WORKING COPY. Merged in changes from Chad's ChangeLog. |
| 16-Apr-2013 | Paul Haigh | V4.0 | WORKING COPY. Merged in changes from Paul's ChangeLog. |
| 17-Apr-2013 | Chad Loseby | V4.1 | WORKING COPY. Seel SLN15 - Merged in requirements from ACCESS Remediation SOW NFR RTM |
| 17-May-2013 | Paul Haigh | V5.0 | Removed this from the Definitions Tab: "XXX This is the document we are working on." |
| 17-May-2013 | Paul Haigh | V5.1 | Replaced "Project teams (vendor-supplied or otherwise)" with "Supplier". |
| 21-May-2013 | Paul Haigh | v5.2 | Removed: H2.1.21,Infrastructure,General Hosting Provider will build Customers private cloud utilizing dedicated physical and virtual separation and components. |
| 22-May-2013 | Paul Haigh | v5.3 | Made change to "H11.1.34". Removed "During the maintenance period, ". |
| 24-May-2013 | Paul Haigh | v5.4 | Modified Table of Contents to include Diagrams for Hosting and Wan Design. |

| | | | |
|---|---|---|---|
| 18-Jun-2013 | Eddy Paul | v5.5 | Deleted H2.1.2 Verbiage modified as per discussion 6/21/13 |
| 18-Jun-2013 | Eddy Paul | v5.5 | Modified H2.1.17 Verbiage modified as per discussion 6/21/13 |
| 18-Jun-2013 | Eddy Paul | v5.5 | Modified H2.1.18 Verbiage modified as per discussion 6/21/13 |
| 18-Jun-2013 | Eddy Paul | v5.5 | Modified H2.1.21 Verbiage modified as per discussion 6/21/13 |
| 18-Jun-2013 | Eddy Paul | v5.5 | Modified H4.1.4 Verbiage modified as per discussion 6/21/13 |
| 18-Jun-2013 | Eddy Paul | v5.5 | Modified H4.1.5 Verbiage modified as per discussion 6/21/13 |
| 18-Jun-2013 | Eddy Paul | v5.5 | Modified H4.1.17 Please see 28.5 miles as per discussion 6/21/13 |
| 18-Jun-2013 | Eddy Paul | v5.5 | Modified H11.1.12 through H11.1.14 to read H9.1.12 through H9.1.14 (H9 Continuity tab) |
| 18-Jun-2013 | Eddy Paul | v5.5 | Modified H9.1.12 Verbiage modified as per discussion 6/21/13 |
| 18-Jun-2013 | Eddy Paul | v5.5 | H7.1.3 Verbiage modified as per discussion 6/21/13 |
| 21-Jun-2013 | Eddy Paul | v5.5 | H1A T1A3.6 outstanding question |
| 21-Jun-2013 | Rob Ball | v5.6 | Removed SLN4.1.72, SLN4.1.73 and SLN4.1.74. These are functional requirements |
| 21-Jun-2013 | Rob Ball | v5.6 | SLN3.1.3 removed text "Suggest the following change" |
| 21-Jun-2013 | Rob Ball | v5.6 | SLN5.1.1 removed -- self reference requirement to itself |
| 21-Jun-2013 | Rob Ball | v5.6 | SLN51.32 removed. This is a functional requirement |
| 21-Jun-2013 | Rob Ball | v5.6 | SLN7.1.34 removed text "while maintaining compliance with CMS rules." |
| 21-Jun-2013 | Rob Ball | v5.6 | SLN10.1.19 removed text "Note: Vermont needs to validate # of months" |
| 21-Jun-2013 | Rob Ball | v5.6 | SLN13 Software -- changed Siebel Email/Web Offer Designer, Siebel Email Marketing Server, Siebel Campaign Management, Siebel Web Marketing, Siebel Marketing Server entries to indicate Vermont ULA and CGI Validation |
| 23-Jun-2013 | Paul Haigh/Rick Ketchem/Rob Ball | v5.7 | SLN15.1.15 Deleted (covered elsewhere):<br>- NIST 800-53A and NIST 800-53 rev3 Moderate baseline<br>- IRS pub 1075, which points back to NIST 800-53 rev 3<br>- NIST 800-53A rev1 guidance (http://csrc.nist.gov/publications/nistpubs/800-53A-rev1/sp800-53A-rev1-final.pdf ) and Harmonized Security and Privacy Framework.<br>- CMS requirements, which points back to NIST 800-53 rev3 moderate baseline |
| 23-Jun-2013 | Paul Haigh/Rick Ketchem/Rob Ball | v5.7 | TIA.3.6 removed requirement |

## SOV Consolidated Non-Functional Requirements Traceability Matrix (RTM)

### Definitions

| | | |
|---|---|---|
| | Access Management | Access Management means the management of End User access to the Environments. |
| | Actuate Report Server | Actuate Report Server means the software of that name that is installed on a Windows Server in accordance with the Certified Configuration for Siebel CRM Programs for reporting and printing purposes. |
| | Administration Service | Administration Services mean Application Management Services delivered by hosting provider under an defined deployment model. |
| | Administrative User | Administrative User means an End User assigned by Customer to (i) identify the End Users permitted to use certain components of the hosted Environment and, (ii) to assign one or more responsibilities to each End User. |
| | After-Action Review | After-Action Review means the meeting held between Hosting Provider and Customer after Production Go-Live of a migration or Transition to Hosting Services for the purpose of assessing the success of the project and any outstanding issues. |
| | Agent | Agent can be the term substituted for the Hosting Provider. |
| | Agreement | Agreement is defined as: the Master Service Agreement between SOV and CGI, and its supporting exhibits, addendums, and statements of work |
| | Anticipated Peak Workload | Anticipated Peak Workload means target or goal workload for the Hosting Environment during testing. |
| | Application | Application is defined as: a specific instance of computer software, purchased or developed, which performs essential functions |
| | Application Administrator | Applications Administrator means the role assigned to an End User under which such End User is responsible for performing as technical lead administrator. |
| | Application Management Services | Application Management Services means services performed by Hosting Provider to manage, monitor and administer the Programs within Customer's Environments. |
| | Application Server | An Application Server is a software framework dedicated to the efficient execution of procedures (programs, routines, scripts) |
| | Application Tier | Application Tier means the server that resides in a middle-tier, between the desktop clients and the database tier. Desktop clients send their requests to a server in the Application Tier, which processes the request or sends it to another server, such as the database server. (Web Server, Forms Server, Concurrent Processing Server, Reports Server, Admin Server, etc.) |
| | Approved Third Party Software | Approved Third Party Software means Third Party Software separately acquired by Hosting Provider or Customer that adheres to Hosting Providers integrations and Operational standards |
| | Architecture Design Document | Architecture Design Document means a document prepared by Hosting Provider that specifies Customer's Hosted architecture(Physical and Logical) at the commencement of Hosting Services. |
| | Architecture Document | Architecture Document means a document(s) prepared and maintained by Hosting Provider that reflects the configuration of Customer's Environment during the performance of Hosting Services. |
| | Authorized Network Provider (ANP) | Authorized Network Provider means a network provider approved by Customer that the Hosting Provider has retained for the purpose of providing connectivity for the Hosting Services in accordance with service level standards. |
| | Availability Management | Availability Management is defined as: the measurement and management of infrastructure, including measurement of service failures and the time taken to resume service. |
| | Availability Plan | The Availability Plan is the plan that detils the availability of both the services provided by the Hosting Provider. |
| | Back Out Plan | Back Out Plan means a list of steps, and the roles or individuals responsible for performing such steps that are required to reverse Changes that had been applied to Customer's Production and Non-Production Environments. |
| | Bandwidth | Bandwidth is defined as: the amount of traffic to be carried through a network. |
| | Base Configuration | Base Configuration means the standard amount of server, storage, networking, firewall, load balancing provided for Customer's Environments. |

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| | Base Products | Base Products are unaltered software components, such as executable programs and compiled libraries. |
| | Batch Management Software | Batch Management Software means software to enable Hosting Provider to schedule, monitor, and manage batch workloads in Customer's Environment. An example of Batch Management Software is Concurrent Manager. |
| | Break-fix | Break-fix means a code change designed to restore, to its pre-Change state, the logic or functionality of a CEMLI that had been affected by a Change to an Environment. |
| | Business Intelligence Technology and Application Pro | Business Intelligence Technology and Applications Program means an Program identified by a Business Intelligence Application or a Business Intelligence Technology Program. |
| | Capacity Management | Capacity Management means the process of planning, analyzing, and sizing storage and transaction processing capability to enable the Production Environment to handle data processing demand. |
| | Capacity Plan | Capacity Plan is defined as: Documentation of how the Solution's capacity requirements were calculated, including all formulas and actual calculations, and how the requirements will be met, managed, monitored, and resolved. |
| | CEMLI | CEMLI is an acronym for any "configuration, extension, modification, localization, and integration," made to any Program. |
| | Certified Configuration | Certified Configuration means the combination of the configuration, instances, Programs, and the operating system, as provided by Hosting Provider, that is compliant with Hosting Provider standards and policies. |
| | Change | Change means a Hosting Provider- or Customer-initiated deployment of a specific addition, modification or removal, of a component, item, feature or function, to an Environment. Examples of Changes are the deployment of a Release into the Environment and a modification to the Environment configuration. |
| | Change Action Plan | Change Action Plan means a plan that identifies the steps, and the roles or individuals responsible for performing such steps that are required to complete a specific Change to an Environment. |
| | Change Management | Change Management means the management and deployment of Changes to an Environment. |
| | Change Request | Change Request means a request by Customer via Hosting Provider Change Management process for a Change to an Environment. |
| | Code Refresh | Code Refresh means the process of copying the full application code from a Source Environment to a Target Environment and making the required configuration Changes within the application tier of the Target Environment. |
| | Computer and Administration Services | Computer and Administration Services mean Application Management Services delivered by Hosting Provider deployment model. |
| | Concurrent Manager | Concurrent Manager is an example of Batch Management Software. |
| | Concurrent Peoplesoft Enterprise Users | Concurrent PeopleSoft Enterprise Users means the number of PeopleSoft Enterprise - Professional Application Users, PeopleSoft Enterprise CRM Self Service Application Users, PeopleSoft Enterprise Financials Self Service Application Users, PeopleSoft Enterprise Human Resources Self Service Application Users, PeopleSoft Enterprise Portal Self Service Application Users, and PeopleSoft Enterprise Learning Solutions Self Service Application Users simultaneously logged into the Environment. |
| | Configuration Management | Configuration Management is defined as: the process of identifying, recording, and reporting of Infrastructure components (hardware, software, and associated documentation), including but not limited to their versions, constituent components, and relationships. |
| | Configuration Migration | Configuration Migration means the process of copying application metadata and artifacts from a Source Environment to a Target Environment and making the required configuration Changes within the Target Environment. |
| | Continental United States (CONUS) | Continental United States (CONUS) refers to the continental or contiguous 48 states including DC. It excludes Hawaii, Alaska, and any other territory. |
| | Contract Document | Contract Document means the contract signed by both Hosting Provider and Customer that is governed by the Agreement that outlines the Hosting Provider Programs and Services. |
| | Core Services | Core Services means Computer and Administration Services or Administration Services. |
| | CPE | CPE means Customer-provided network equipment. |

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| | Critical Patch Updates | Critical Patch Updates means updates that are provided to Customer by Hosting Provider's Support Services organization as part of provider's technical support services and that are applied to the Environment as part of the Emergency Release Management process. Critical Patch Updates are designed to address significant security vulnerabilities and other issues that may relate to, or serve as prerequisites to, security issues, and may also include non-security fixes that are designed to address interdependency issues related to security patches. |
| | CSI | CSI means the Customer Support Identifier that is used by Customer to access and receive services from Hosting Provider Support and the Hosting Provider Service Desk. |
| | Customer | Customer means the entity: State of Vermont. |
| | Customer Controlled Environments | Customer-Controlled Environments mean the environments identified in which Customer or its designee is authorized by Hosting Provider to use, apply Changes to, and maintain. Possible uses of Customer-Controlled Environments are development or testing. |
| | Customer Handling Instructions | Customer Handling Instructions means Customer-specific information in Hosting Provider's support system that is used by Hosting Provider personnel performing services for Customer. |
| | Customer Provided Network Equipement | Customer-Provided Network Equipment means network devices and circuits provided and managed by Customer that are installed in Hosting Provider's Data Center. |
| | Customer System Integrator | Customer System Integrator means entities given authority to act on behalf of the Customer in the areas of software development and configuration following the Hosting Providers change and configuration management process. |
| | Customers Data Center | Customer's Data Center means the Data Center retained and managed by Customer, or by a third party retained by Customer. |
| | Customers Help Desk | Customer's Help Desk means the point of contact provided by Customer for its End Users with respect to questions or issues that arise regarding the Hosting Provider Services and Environments. |
| | Data Center | "Data Center" shall refer to the Hosting Provider Data Center unless specified otherwise |
| | Data Center Security Policy | Data Center Security Policy means a document prepared and maintained by Hosting Provider that outlines access control requirements applicable to Hosting Provider's Data Center, including access requests, physical screening, on-site behavior and prohibited items. |
| | Database Refresh | Database Refresh means the process of copying a database from a Source Environment to a Target Environment and making the required configuration Changes within the database of the Target Environment. |
| | Decommission | Decommission means the process defined by Hosting Provider under which Customer's use of Hosting Provider Environments is ended and the Hosting Provider Services are terminated. |
| | Decommission Tape | Decommission Tape means the magnetic tapes provided by Hosting Provider as part of the Decommission of Computer and Administration Services that contain a copy of the production data from Customer's Production Environment. |
| | Dedicated | Means isolated physical and virtual infrastructure for purpose of completely segregating Customer environments from other Hosting Provider tenants. Including firewall, load balancer, switch, router, server, storage. |
| | Default-deny | Default-deny is a network-oriented approach to access control that implicitly denies the transmission of all network traffic but then specifically allows only required network traffic based on protocol, port, source, and destination. |
| | Demilitarized Zone | Demilitarized Zone means the "neutral zone" between the Internet and Hosting Provider's, or as applicable, a Customer's, private network. |
| | Demo and Demo Environment | Demo, and Demo Environment, means a Demonstration Environment. |
| | Demonstration Environment | Demonstration Environment means a type of Production Support Environment that is used for demonstration purposes. |
| | Dev and Dev Environment | Dev, and Dev Environment, means a Development Environment. |
| | Development Environment | Development Environment means a type of Non-Production Environment in which Customer or Customer Alternate performs development activities in support of Hosting Provider Services, such as the creation of customizations. |
| | Diagnostic Server | Diagnostic Server means a server enabled by Hosting Provider as part of Administration Services to remotely monitor the status and operation of Customer's Environment. |

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| | Disaster | Disaster means an Unplanned Outage that causes a complete loss of access to and use of the Hosting Provider Programs in the Production Environment at the Primary Site for a period greater than 24 hours. |
| | Disaster Recovery | Disaster Recovery means services provided by Hosting Provider in accordance with the applicable Schedule to recover Production Environment data and to re-establish the Production Environment. |
| | Disaster Recovery Environment | Disaster Recovery Environment means the instance within the Secondary Site that mirrors Production in capacity, configuration in every way for the sole purpose of maintaining and operating Customers Production applications in the event of a disruption to the Hosting Providers services in Primary Site. |
| | Disaster Recovery Plan | Disaster Recovery Plan means a plan prepared and maintained by Hosting Provider that identifies tasks related to recovery and business continuity in the event of a Disaster. |
| | DLP or Data Loss Prevention | DLP or Data Loss Prevention means a system that is designed to detect potential data breach incidents in timely manner and prevent them by monitoring data while in-use (endpoint actions), in-motion (network traffic), and at-rest (data storage). |
| | DMZ Server | DMZ Server for Hosting Provider Managed Applications means a public-facing application server or web server located in the Demilitarized Zone. |
| | DNS | DNS means the translation of a URL text address (e.g., state.vt.us) into a numeric Internet address (e.g., 200.213.11.6). |
| | DR | DR means Disaster Recovery. |
| | Duty Manager | Duty Manager means the Hosting Provider personnel identified by Hosting Provider as Customer's point of contact for escalating Service Requests within Hosting Provider. |
| | Embedded Software | Embedded Software is Third Party Software that is incorporated by Hosting Provider into certain Hosting Provider Programs. |
| | Emergency Release Management | Emergency Release Management means the process by which Critical Patch Updates are applied to Customer's Environment. |
| | End User | End User means an individual who is authorized by Customer to use the Hosting Provider Programs within the Environment. |
| | Enhanced Recovery Services | Enhanced Recovery Services means the Service under which Hosting Provider provides Disaster Recovery services – to meet Production RPO and RTO. |
| | Enterprise Governance | Enterprise Governance, Risk, and Compliance Program means an Hosting Provider Program identified by Hosting Provider as an Enterprise Governance, Risk, and Compliance Program. |
| | Entitlement | Entitlement means the base level of services that are included as part of Hosting Provider's standard Hosting Provider Services. |
| | Environment | Environment means the combination of Infrastructure and supporting software that is (i) configured for the Hosting Provider Programs operating on it and for specific uses as part of the Hosting Provider Services, and (ii) used by Hosting Provider to perform Hosting Provider Services. For Computer and Administration Services and Administration Services, the Environment consists of the Production Environment, any Production Support Environment(s) and any Non-Production Environment(s). |
| | Environment Plan | Environment Plan means a document prepared and maintained by Hosting Provider that identifies the environments used during implementation of the Hosting Provider Services and their respective purposes, such as development, CEMLI design and test, UAT, or staging purposes. |
| | Federal Data Service Hub | The Federal Data Service Hub is the electronic interface being created by the Center or Medicare &Meidaid Services (CMS) that will serve as an information hub to provide one connection to the common federal data sources (including but not limited to SSA, IRS, DHS) needed to verify consumer application information for income, citizenship, immigration status, access to minimum essential coverage, etc. |

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| | Federal Environment | Federal Environment means a dedicated, caged Hosting Provider Environment at Hosting Provider's Data Center for United States federal government entity customers that purchase Computer and Administration Services and Hosting Provider's Federal Security Services. |
| | Federal Security Services | Federal Security Services means a Service Option applicable to Computer and Administration Services for United States federal government Customers, as described in the Federal Security Services Schedule. |
| | Federal Tax Information (FTI) | Federal Tax Information (FTI) is defined as: federal tax returns, and information contained on said tax returns |
| | Full Refresh | Full Refresh means the process of copying of the database and full application code from a Source Environment to a Target Environment and making the required configuration Changes within the database and application tier of the Target Environment. |
| | Functional Service Desk | Functional Service Desk means services under which Hosting Provider Hosting Provider creates, receives, monitors, routes, and closes Functional Service Desk Service Requests. |
| | Functional Service Desk Service Request | Functional Service Desk Service Request means a request for assistance with Customer's Environment or any component thereof submitted to the Functional Service Desk. |
| | Go-Live | Go-Live means Production Go-Live. |
| | Governance | Governance is the action or manner of governing. Governance Services refers to the process whereby the Hosting Provider provides expertise in the area Governance where it pertains to the both the software and the hosting services provided by the Hosting Provider. Move to the top in the stack. |
| | Hosting Provider | Hosting Provider means the Hosting Provider line of business that delivers the Hosting Provider Services. |
| | Hosting Provider Application List | Hosting Provider Application List is a document that lists all application programs covered by Hosting Provider services. |
| | Hosting Provider Continuous Connection Network | Hosting Provider Continuous Connection Network means a dedicated network designed to support Network Connectivity between Hosting Provider and Customer's Environment, and that uses the following elements: a firewall, VPN, intrusion detection, authentication, reporting, and DNS. |
| | Hosting Provider Controlled Environments | Hosting Provider-Controlled Environments are those environments in which Hosting Provider has sole control to make Changes. |
| | Hosting Provider Controlled Infrastructure | Hosting Provider-Controlled Infrastructure means Infrastructure used for Administration Services that is managed and maintained solely by Hosting Provider. |
| | Hosting Provider Customer Portal | Hosting Provider Customer Portal means the Customer-specific Internet based portal provided by Hosting Provider to Customer as part of the Hosting Provider Services by which Customer may view performance reports generated by Hosting Provider and the status of Service Requests. |
| | Hosting Provider Data Center | Hosting Provider Data Center means Hosting Provider's Data Center. Hosting Provider's Data Center means the Data Center(s) retained and managed by Hosting Provider, or by a third party retained by Hosting Provider, at which Hosting Provider delivers Hosting Provider Hosting Provider Services. |
| | Hosting Provider Data Center Badge Access | Hosting Provider Data Center Badge Access Form means an Hosting Provider form that must be completed by a person seeking to visit Hosting Provider's Data Center. Once completed by the visitor, the form is forwarded within Hosting Provider for review and approval purposes, and is retained by Hosting Provider in accordance with Hosting Provider policy. |
| | Hosting Provider Internal Support Network | Hosting Provider Internal Support Network is comprised of a firewall, VPN, intrusion detection, authentication, reporting, and DNS. This isolated network is the standard Network Connectivity option for Hosting Provider personnel to connect to the Environment. |
| | Hosting Provider Product Issue | Hosting Provider Product Issue means an Incident associated with the functioning of Hosting Provider Program(s) (including program errors) but is not caused by Hosting Provider's performance of Hosting Provider Services. |

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| | Hosting Provider Program | Hosting Provider Program means the Hosting Provider software product licensed to Customer separately and for which Hosting Provider Hosting Provider performs Hosting Provider Services. Hosting Provider Programs shall be deemed to mean all the Hosting Provider Programs identified for which Hosting Provider is providing Hosting Provider Services. Hosting Provider Programs may include Hosting E-Business Suite Programs, PeopleSoft Enterprise Programs, Siebel CRM Programs, Hosting Provider Technology Programs, Hosting Provider Hyperion Programs, Business Intelligence Technology and Applications Programs, Retail Programs, Agile Product Lifecycle Management Programs, Enterprise Governance, Risk, and Compliance Programs, User Productivity Kit Programs. The term Hosting Provider Program includes any Embedded Software within the applicable Hosting Provider Program. |
| | Hosting Provider Project Plan | Hosting Provider Project Plan means the document prepared by Hosting Provider that outlines the tasks to be performed by Hosting Provider, including anticipated start and end dates, for Transition Advisory Services. |
| | Hosting Provider Service Desk | Hosting Provider Service Desk means a team of resources provided by Hosting Provider Hosting Provider as part of Hosting Provider Services, under which Hosting Provider Hosting Provider creates, receives, monitors, routes, and closes Service Requests or Incidents, as described in the applicable Schedule. |
| | Hosting Provider Services | Hosting Provider Services is defined as: the Computer and Administration Services, Administration Services, and all other services provided by Hosting Provider which are ordered under and identified in the Ordering Document. |
| | Hosting Provider Support | Hosting Provider Support means the Hosting Provider technical support organization (Hosting Provider Support Services) that provides product-related technical support services for Hosting Provider Programs. |
| | Hosting Provider Technology Program | Hosting Provider Technology Program means an Hosting Provider Program identified by Hosting Provider as a Technology Program. Hosting Provider performs Hosting Provider Services under an applicable agreement. |
| | HPCCN | HPCCN means Hosting Provider Continuous Connection Network. |
| | HPCP | HPCP means Hosting Provider Hosting Provider Customer Portal. |
| | HPISN | Means Hosting Provider Internal Support Network |
| | IDS or Intrusion Detection System | IDS or Intrusion Detection System means a system that monitors Customer's Environment for security violations such as attack signatures, anomalous ports, and anomalous protocols being accessed. |
| | Identity Management (IdM) | Identity Management (IdM) describes the management of individual identifiers, their authentication, authorization, and privileges within or across system and enterprise boundaries |
| | Implementer | Implementer means a Third Party Vendor or Software Integrator retained by Customer to provide implementation services to Customer in support of Hosting Provider Services. For the purpose of this definition, an Implementer may be Hosting Provider's Consulting line of business. |
| | Incident | Incident is defined as: any event experienced by Customer in its use of the Hosting Provider Services for which a Service Request has been submitted, that is not consistent with the standard, documented operation of the Hosting Provider Services per the Agreement, and which causes, or may cause, a Service Interruption. |
| | Individual Patch | Individual Patch means a software fix, created by Hosting Provider, to an Hosting Provider Program and provided between patch set Releases. Individual Patches are designed to address specific software errors or vulnerabilities but not otherwise intended to change the functionality of programs. |
| | Information Security Incident Response Lead | Information Security Incident Response Lead means the Hosting Provider employee assigned by Hosting Provider to lead Hosting Provider's response to Severity 1 and Severity 2 information security Incidents. |
| | Information Security Incident Response Plan | Information Security Incident Response Plan (ISIRP) means a document prepared by Hosting Provider that details activities that are to be performed in the event of an information security Incident related to the applicable Environment and Hosting Provider Services. Hosting Provider periodically updates the ISIRP document to reflect current information security Incident response planning. |
| | Information Security Incident Response Team | Information Security Incident Response Team means the Hosting Provider team that is designated by Hosting Provider to prepare for, and respond to, information security Incidents. |

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| | Information Security Manager | Information Security Manager means an Hosting Provider employee designated by Hosting Provider to act as a liaison regarding security issues that affects the applicable Hosting Provider line of business. Each Hosting Provider line of business unit may have an Information Security Manager. |
| | Infrastructure | Infrastructure means the combination of Hosting Provider's Data Center, hardware, servers, virtualization, operating system, storage, and networking equipment, used for the delivery of Hosting Provider Services. |
| | Infrastructure Requirements | Infrastructure Requirements means information provided by Customer in the Infrastructure Requirements Document regarding the Infrastructure for the Hosting Provider Services, such as capacity and usage information. |
| | Infrastructure Requirements Document | Infrastructure Requirements Document means the document required by Hosting Provider in which Customer specifies its Infrastructure Requirements. |
| | Interface | An interface is a point where two systems, subjects, organizations, etc., meet and interact. |
| | Interface Management Plan | An Interface Management Plan is a plan that will enumerate, document, and describe the necessary details concerning all the electronic interfaces that the Hosting Provider will create for the Customer. This may include non electronic interfaces if so deemed by the Customer. |
| | Internet Protocol Security | Internet Protocol Security means a security framework based on open standards and designed to protect communications over Internet Protocol networks through the use of cryptography. |
| | Ipsec | IPsec means Internet Protocol Security. |
| | ISIRL | ISIRL is the Information Security Incident Response Leader. |
| | ISIRP | ISIRP means Information Security Incident Response Plan. |
| | ISIRT | ISIRT means Information Security Incident Response Team. |
| | ISM | ISM means an Information Security Manager. |
| | Least Privilege | Least Privilege means a system-oriented approach to access control under which user permissions and system functionality are specifically evaluated and access is restricted to the resources required for users or systems to perform their respective duties. |
| | Maintenance Code Release | Maintenance Code Release means any Release designed to address the manner in which Hosting Provider Programs process data or operate, and neither contains new functionality nor changes the results of processing data. Examples of Maintenance Code Releases are Individual Patches, tool updates, tax updates, bug fixes, and maintenance packs. The term Maintenance Code Release specifically excludes any Service Pack or Upgrade. |
| | Maintenance Window | Maintenance Window means, depending on the context, a Weekly Maintenance Window, a Semiannual Maintenance Window, or any other period of time scheduled by Hosting Provider for a Planned Outage within which Hosting Provider may perform maintenance activities on Infrastructure. |
| | Major Maintenance Window | Major Maintenance Window means the agreed to time when Hosting Provider can perform system maintenance/configuration changes on Production Environment that will reduce or make the Production Environment unavailable. |
| | Major Release | Major Release means an Upgrade that is designated as follows: (i) for all Hosting Provider Programs by the identifying first number of the Upgrade (e.g., change from Application 9.x to Application 10.x), and (ii) for PeopleSoft Enterprise Programs, by the identifying first number of the Upgrade after the decimal place (e.g., change from version 9.1 to 9.2). |
| | Major Upgrade | Major Upgrade means a Major Release. |
| | Management Link | Management Link means the type of Network Connectivity used for Administrations Services. |
| | Migration Readiness Assessment | Migration Readiness Assessment means a document that contains Hosting Provider's assessment of Customer's Infrastructure and that is used for creating a Production Environment that conforms to Hosting Provider's Certified Configuration. |

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| | Minor CEMLI Enhancement Request | Minor CEMLI Enhancement Request means a request by Customer, via Hosting Provider's Change Management process, for Hosting Provider Hosting Provider to enhance a CEMLI to an Hosting Provider Program within Customer's Environment, where such enhancement is designed to improve the functionality of the CEMLI and does not require Hosting Provider more than 40 person hours to perform. A "person hour" is one hour of work performed by one Hosting Provider resource. |
| | Minor Maintenance Window | Minor Maintenance Window means the agreed to time when Hosting Provider can perform system maintenance/configuration changes on Production Environment that will have no effect on Production Environment availability. |
| | Minor Release | Minor Release means an Upgrade that contains new functionality and that is upwardly compatible to an earlier Release of the applicable Hosting Provider Program. |
| | Monitoring Services | Monitoring Services are services or software that performs services that observe and check the progress or quality of the Customer Application and Customer Infrastructure over a period of time and keep under systematic review. Suggest we move it to the top and put into Definitions. |
| | My Hosting Provider Support | My Hosting Provider Support means Hosting Provider's web-based customer support system under which Hosting Provider provides technical support for Hosting Provider Programs and by which Customer may submit Service Requests. Customer obtains the use of My Hosting Provider Support by purchasing technical support services from Hosting Provider. |
| | Non-Production Environment | Non-Production Environment means an instance that is specifically configured for Customer's use (or, as applicable, Customer's Implementer's use) of the Hosting Provider Programs for non-production activities that relate to the Hosting Provider Services, such as development, training, data conversion, and CEMLI maintenance. |
| | Optional Third Party Software | Optional Third Party Software means any Third Party Software not supplied by Hosting Provider. |
| | OS | OS means operating system. |
| | Outage | Outage means a complete loss of access to and use of the Production Environment, the Production Support Environment, the Non-Production Environment, or the Pre-Production Environment. An Outage may be a Planned Outage or an Unplanned Outage. |
| | Overall Program Plan | Overall Program Plan means a project plan prepared by Hosting Provider that outlines the necessary tasks, task performance schedules, and the roles or individuals required to perform such tasks, for a transition. |
| | Partial Refresh | Partial Refresh means the process of copying a database and/or a portion of application code from a Source Environment to a Target Environment and making the required configuration Changes within the database and application tier of the Target Environment. |
| | Password Manager Utility | Password Manager Utility means an Hosting Provider-proprietary Tool used by Hosting Provider to manage passwords and provide controlled-access to database and application passwords to those End Users who have named Linux/Windows operating system accounts. |
| | Peoplesoft Applications | PeopleSoft Enterprise CRM, Enterprise Financials, Human Resources, Portal, Performance Management, Learning Solutions |
| | Performance Management | Performance Management means a subset of Hosting Provider Services under which Hosting Provider manages the speed of transaction response of the Hosting Provider Programs, and batch job execution in the Production Environment. |
| | Periodic Maintenance Plan | Periodic Maintenance Plan means a written plan prepared and maintained by Hosting Provider that generally describes the schedule for the application of Changes, new Releases, and Upgrades, to the Production Environment. |
| | Personally Identifiable Information (PII) | Personally Idenfitiable Information (PII) is defined as: information that can be used on its own or with other information to identify, contact, or locate a single person, or to identify an individual in context. |
| | Planned Outage | Planned Outage means an Outage scheduled by Hosting Provider during which Hosting Provider performs system maintenance and other activities for the Environment and the Hosting Provider Services. |
| | PMP | PMP means Periodic Maintenance Plan. |
| | Point Release | Point Release means a Minor Release. |

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| | Post Production Go-Live | Post Production Go-Live means the period following the Production Go-Live of the Production Environment. |
| | Pre-Production Environment | Pre-Production Environment means the instance within the Environment that mirrors Production in capacity, configuration in every way for the sole purpose of applying and testing all changes, hot fixes, patches, code release and/or upgrades before releasing changes to Production. |
| | Primary Site | Primary Site means the Data Center at which Customer's Environment is located and at which Hosting Provider delivers Hosting Provider Services. The Environment and the delivery of Hosting Provider Services may be relocated to a Secondary Site in the event of a Disaster. |
| | Priority Level | Priority Level means the classification used in conjunction with Severity Level to identify the priority of a Service Request with respect to the Hosting Provider Services. |
| | Problem | Problem means (i) the collection of multiple recurring Incidents that exhibit common symptoms and that originate from a single, common cause, and for which the cause is unknown, or (ii) a single Incident that results from a single error and that has an on-going significant impact on the Hosting Provider Services (such as an Unplanned Outage), and for which the cause is unknown. |
| | Problem Management | Problem Management means a subset of Hosting Provider Services under which Hosting Provider manages Problems within Customer's Environment. |
| | Production Assessment | Production Assessment means a document that is prepared by Hosting Provider prior to Production Go-Live and that contains Hosting Provider's assessment of the compliance of Customers' Environment with Hosting Provider Hosting Provider standards. |
| | Production Environment | Production Environment means the instance within the Environment that is specifically set up and configured to support Customer's use of the Hosting Provider Programs, and used by Customer, for production operations. The Production Environment consists of the collection of database servers, application ("mid-tier") servers, and other servers comprising Customer's transactional production system. |
| | Production Go-Live | Production Go-Live means the date on which Customer first commences use of the Production Environment for production operations (i.e., to process live data). |
| | Production Ready Status | Production Ready Status means a designation given by Hosting Provider to Customer indicating that Customer may commence use of a Production Environment for production operations. |
| | Production Support Environments | Production Support Environment means the TEST and DEMO Environments that are specifically set up and configured in a manner that closely resembles the Production Environment, and that are used, as applicable, to troubleshoot and facilitate Incident resolution, to test changes prior to promotion of such changes to the Production Environment and for demonstration purposes. |
| | Program Responsibilities | Program Responsibilities means the functionality that a User may use within the Hosting Provider Programs. |
| | Program-Specific Application Management | Program-Specific Application Management Services means the Application Management Services specifically applicable to a certain set of Hosting Provider Programs. |
| | Program-Specific Standards | Program-Specific Standards means the Standards Schedule specifically applicable to a certain set of Hosting Provider Programs. |
| | Project Team | Project Team is defined as: a group of individuals working on a common objective or goal. |
| | Provisioning Release Plan | Provisioning Release Plan means a document or set of documents prepared by Hosting Provider that describes the installation and configuration of hardware and software required for the Hosting Provider Environment. |
| | RCA | RCA means Root Cause Analysis. |
| | Recovery Point Objective or RPO | Recovery Point Objective or RPO means Hosting Provider's objective for the potential maximum time period of data loss, calculated from the onset of a Disaster. |
| | Recovery Time Objective or RTO | Recovery Time Objective or RTO means Hosting Provider's objective for the potential maximum period of time between the declaration of a Disaster and the point at which Customer can resume production operations in the Production Environment. |

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| | Refresh | Refresh means the process of copying a Customer's database files, application files, and/or the application metadata and artifacts from a Source Environment to a Target Environment and updating related configurations within the Environment. |
| | Release | Release means a software change or set of software changes, to Hosting Provider Programs, that is provided to Customer by Hosting Provider's Support Services organization as part of Hosting Provider's technical support services. The term Release includes Upgrades and Maintenance Code Releases. |
| | Release Management | Release Management means a subset of Hosting Provider Services under which Hosting Provider manages the deployment of Releases into Customer's Environment. |
| | Release Plan | Release Plan means a document that details the planning, testing, and executing of proposed Releases. The Release Plan includes a Back Out Plan. |
| | Request | Request for Change means Change Request. |
| | Required Software | Required Software means Third Party Software for which Hosting Provider requires Customer to separately purchase a license and technical support in connection with Hosting Provider Services for certain Hosting Provider Programs, and for which Hosting Provider expressly performs Hosting Provider Services. |
| | Restore | Restore means the process of copying a database and/or full application code from a disk or tape backup to the Environment from which the copy was made. |
| | RFC | RFC means Request for Change. |
| | Root Cause Analysis | Root Cause Analysis means a process by which Hosting Provider seeks to determine the root cause of a Problem and/or an Incident, identify details of any work-around including reasons for the work-around as applicable, and the history of the Problem or Incident. |
| | Sandbox or Sandbox Environment | Sandbox, or Sandbox Environment, means a type of Production Support Environment that is used by Customer for the purposes of prototyping, alternative analysis, proof of concept. This environment is not in the development life cycle. |
| | Secondary Site | Secondary Site means the Data Center other than the Primary Site to which the Environment and delivery of Hosting Provider Services is relocated in the event of a Disaster. |
| | Siebel Applications | Siebel CRM Communications, Media and Energy, Siebel CRM Life Sciences, Siebel CRM Manufacturing and Distribution, Siebel CRM Financial Services, Siebel CRM Public Sector, Siebel CRM Horizontal Applications |
| | Siebel Applications | Siebel CRM Communications, Media and Energy, Siebel CRM Life Sciences, Siebel CRM Manufacturing and Distribution, Siebel CRM Financial Services, Siebel CRM Public Sector, Siebel CRM Horizontal Applications |
| | Semiannual Maintenance Window | Semiannual Maintenance Window means the period of time, to occur approximately every six months, during which Hosting Provider may schedule Planned Outages to perform maintenance activities on Infrastructure. The maintenance activities typically performed by Hosting Provider during a Semiannual Maintenance Window involve components of the Infrastructure that are used to deliver Hosting Provider Services specifically to Customer. |
| | Server | Server means a computing platform with defined processing power, memory capacity, and operating system. The Server may be implemented as a virtual or shared allocation from one or more physical computing platform(s). |
| | Server for Customer Managed Applications | Server for Customer Managed Applications means a Service Option under which Hosting Provider initializes and installs operating system software on an Hosting Provider-provisioned server to enable Customer to access, manage, and monitor such server. |
| | Server for Hosting Provider Managed Applications | Server for Hosting Provider Managed Applications means the Service Option for Computer and Administration Services under which a server is added by Hosting Provider to Customer's Environment to support additional environments. |
| | Service continuity Management | Service Continuity Management means a subset of Hosting Provider Services under which Hosting Provider continues to deliver Computer and Administration Services for the Production Environment following a Disaster. |

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| | Service Interruption | Service Interruption means a material reduction of the functionality and responsiveness of a component of the Production Environment, a Production Support Environment, or a Non-Production Environment, such that Customer's ability to use the Hosting Provider Services to process one or more of Customer's key business transactions is significantly impacted. |
| | Service-oriented architecture (SOA) | Suggest adding the followingo Definitions. Service-oriented architecture (SOA) is a software design methodology based on structured collections of discrete software modules, known as services, that collectively provide the complete functionality of a large or complex software application.[1] Each service that makes up an SOA application is designed to provide a tightly defined set of functions. As a result, each service is built as a discrete piece of code. |
| | Service Pack | Service Pack means a Minor Release. |
| | Service Request | Service Request means a request for assistance with the Environment or any component thereof submitted to My Hosting Provider Support or the Hosting Provider Service Desk. |
| | Service-Specific Application Management | Service-Specific Application Management Services Schedule means Program-Specific Application Management Services Schedule. |
| | Service-Specific Standards | Service-Specific Standards means Program-Specific Standards. |
| | Severity Level | Severity Level means the level of criticality assigned to a Service Request based on defined criteria. |
| | Shared Analytics Infrastructure | Shared Analytics Infrastructure Solutions consistitutes the shared software Solution engineered by the Hosting Provider to provide the Customer with the capability to analyze the data that has been gathered. |
| | Siebel CRM Program | Siebel CRM Program means an Hosting Provider Program identified by Hosting Provider as an Hosting Provider Siebel CRM Program. Hosting Provider performs Hosting Provider Siebel Programs. |
| | Site | Site means a website for which Hosting Provider Services for all Programs. |
| | Site Go-Live | Site Go-Live means the date on which a Site first becomes available to the general public and transactions can be processed on the Site. |
| | Solution | Solution is defined as: the Environments, Applications, and software products running in the Hosting Provider Data Center(s) on behalf of the Customer |
| | SOP | SOP means Standard Operating Procedures. |
| | Source Environment | Source Environment means a Production Environment, Production Support Environment or Non-Production Environment from which data for a Refresh is obtained. |
| | SR | SR means a Service Request. |
| | SSL | SSL means "secure sockets layer," a commonly used protocol for managing the security of a data transmission on the Internet. SSL uses a public-and-private key encryption system, which also includes the use of a digital certificate. |
| | Staging or Staging Environment | Means Pre-Production Environment. |
| | Standard Operating Procedures | Standard Operating Procedures mean Hosting Provider's set of security-focused processes that set forth the standard procedures, activities and tasks performed by Hosting Provider resources while delivering Hosting Provider Services to Hosting Provider customers. |
| | Standy Envrionment | Standby Environment means an Environment located at the Secondary Site that closely resembles the capacity and performance capabilities of the Production Environment at the Primary Site, and that may be used for production operations in the event of a Disaster. |
| | Storage Unit | Storage Unit means a unit of usable Gigabytes of disk storage. |
| | Super User | Super User means an End User that Customer has assigned to assist other End Users in the use of Hosting Provider Services. Super Users serve as the liaison between End Users, Customer's Help Desk, and the Hosting Provider Service Desk. |
| | Supported CEMLIs | Supported CEMLIs mean CEMLIs that were reviewed and approved by Hosting Provider as part of the Production Assessment process and for which Hosting Provider provides Hosting Provider Services in the Production Environment. |

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| | Systems Administrator | System Administrator means an Hosting Provider resource assigned by Hosting Provider to perform tasks to maintain the Environment as part of the Hosting Provider Services. |
| | Target Environment | Target Environment means the Production Environment, Production Support Environment or Non-Production Environment to which data for a Refresh will be applied. |
| | Technology stack | Technology Stack means any database, operating system and middleware used in an Environment. |
| | Test or Test Environment | Test, or Test Environment, means a type of Production Support Environment that is used by Hosting Provider for testing and validating Changes prior to promotion to the Production Environment as well as for recreating events and duplicating issues occurring in the Production Environment for the purposes of troubleshooting and facilitating Incident resolution. |
| | Third Part Software | Third Party Software means any software from a Third Party Software Vendor, which is not provided by Hosting Provider as part of the Hosting Provider Services, and any software developed or provided by Customer. |
| | Third Party Vendor | Third Party Vendor means a provider, other than Hosting Provider, of products or services. |
| | Tools | Tools mean software scripts provided and used by Hosting Provider in the Environment for the delivery of Hosting Provider Services (e.g., to perform environment clones, password changes, service monitoring, and file system maintenance). |
| | Training or Training Environment | Training, or Training Environment, means a type of Production Support Environment that is used by Customer for the purposes of training. |
| | Transaction Link | Transaction Link means the type of Network Connectivity used for Computer and Administration Services. |
| | Transition | Transition means the activities completed and modifications made to a Customer's system and/or to an Hosting Provider Environment as part of Transition Advisory Services. |
| | Transition-Out Plan | "Transition-Out Plan" is a plan that articulates the steps and procedures that the Hosting Provider and the Customer will need to follow in order to successfully move the Customer's Infrastructure, Software, and Application to another Hosting Provider. |
| | Transition Advisory Services | Transition Advisory Services means a service performed by Hosting Provider to convert a Customer's system to an Hosting Provider Environment or to make significant Changes (such as an Upgrade) to an existing Hosting Provider Environment. |
| | UAT | UAT means User Acceptance Testing. |
| | UAT Environment | UAT Environment, means a type of Production Support Environment that is used by Customer for testing User Acceptance and validating Changes prior to promotion to the Production Environment. |
| | Unplanned Outage | Unplanned Outage means an Outage that was not scheduled by Hosting Provider or Customer and is caused by an Incident or Problem. |
| | Upgrade | Upgrade means a new Release of an Hosting Provider Program that contains new functionality and/or under which the results of how such program processes data differs as compared to an earlier Release of such program. |
| | User | User means an End User. |
| | User Acceptance Testing | User Acceptance Testing means a formal testing process that is part of the Change Management Process conducted by Customer of a specified Change to the Environment for the purpose of determining whether such Change meets identified acceptance criteria. |
| | VPN | VPN means Virtual Private Network. |
| | WAN | WAN means Wide Area Network. |
| | Weekly Maintenance Window | Weekly Maintenance Window means the period of time, to occur once per week, during which Hosting Provider may schedule Planned Outages to perform maintenance activities on Infrastructure. The maintenance activities typically performed by Hosting Provider during a Weekly Maintenance Window involve components of the Infrastructure that are used to deliver Hosting Provider Services to Hosting Provider's customers generally, including to Customer. |
| | Windows Software Update Service | Windows Software Update Service means a Microsoft service provided to Hosting Provider under which Microsoft delivers current security updates to Hosting Provider-owned Windows-based computers. |

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| | WSUS | WSUS means Windows Software Update Service. |

## SOV Consolidated Non-Functional Requirements Traceability Matrix (RTM)

### Data Center (DC) General

| Base | Level | Sub | Req ID | Focus | Specifics | Requirement Description | Requirement Fulfilled? | Notes | Evidence |
|---|---|---|---|---|---|---|---|---|---|
| DC | 1 | 1 | DC.1.1 | Data Center | | Data center design and operations will be operated and maintained at the minimum Tier as set forth in the following pages per TIA 942 standards. | | We are not Tier 3 in all areas, but have many tier 3 characteristics. | SOV completed a site visit and assessment of both CGI facilities and is agreement with finding on Sheet H1A TIA 942. |
| DC | 1 | 2 | DC.1.2 | Data Center | | Data center facilities will be located in the continental united states. | | | |
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**SOV Consolidated Non-Functional Requirements Traceability Matrix (RTM)**
**Data Center (DC) TIA 942 Standards**

**The Hosting Provider shall deliver and maintain services from the Hosting Provider Data Center which meet or exceed the particular tier level of service for each line item, as defined on each in the Tier Rating column**

| Base | Level | Sub | Req ID | Focus | Specifics | Tier Requirements | Tier 1 | Tier 2 | Tier 3 | Tier 4 | Tier Rating | Notes | Evidence |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TIA | 1 | 1 | TIA.1.1 | Data Center (Architectural) | Location | Proximity to flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map | no requirement | not within flood hazard area | Not within 100-year flood hazard area and greater than 91 m / 100 yards from 50-year flood hazard area | Greater than 91 m / 100 yards from 100-year flood hazard area | T3 | | |
| TIA | 1 | 2 | TIA.1.2 | Data Center (Architectural) | Location | Proximity to coastal or inland waterways | no requirement | no requirement | Greater than 91 m/ 100 yards | Greater than 0.8 km / 1/2 mile | T4 | | |
| TIA | 1 | 3 | TIA.1.3 | Data Center (Architectural) | Location | Proximity to major traffic arteries | no requirement | no requirement | Greater than 91 m / 100 yards | Greater than 0.8 km / 1/2 mile | T3 | | |
| TIA | 1 | 4 | TIA.1.4 | Data Center (Architectural) | Location | Proximity to airports | no requirement | no requirement | Greater than 1.6 km / 1 mile and less than 30 miles | Greater than 8 km / 5 miles and less than 30 miles | T4 | | |
| TIA | 1 | 5 | TIA.1.5 | Data Center (Architectural) | Location | Proximity to major metropolitan area | no requirement | no requirement | Less than 48 km / 30 miles | Less than 16 km / 10 miles | T4 | | |
| TIA | 1 | 6 | TIA.1.6 | Data Center (Architectural) | Parking | Separate visitor and employee parking areas | no requirement | no requirement | yes (physically separated by separated entries) | yes (physically separated by fence or wall with separated entries) | T2 | | |
| TIA | 1 | 7 | TIA.1.7 | Data Center (Architectural) | Parking | Separate from loading docks | no requirement | no requirement | yes (physically separated by separated entries) | yes (physically separated by fence or wall with separated entries) | T4 | | |
| TIA | 1 | 8 | TIA.1.8 | Data Center (Architectural) | Parking | Proximity of visitor parking to data center perimeter building walls | no requirement | no requirement | 9.1 m / 30 ft minimum separation with physical barriers to prevent vehicles from driving closer | 18.3 m / 60 ft minimum separation with physical barriers to prevent vehicles from driving closer | T2 | | |
| TIA | 1 | 9 | TIA.1.9 | Data Center (Architectural) | Multi-tenant occupancy within building | ***Multi-tenant occupancy within building*** | no restriction | Allowed only if occupancies are non-hazardous | Allowed if all tenants are data centers or telecommunications companies | Allowed if all tenants are data centers or telecommunications companies | T2 | | N/A |
| TIA | 1 | 10 | TIA.1.10 | Data Center (Architectural) | Building construction | Type of construction | no restriction | no restriction | Type IIA, IIIA, or VA | Type IA or IB | T3 | | |
| TIA | 1 | 11 | TIA.1.11 | Data Center (Architectural) | Building construction | Fire resistive requirements | no requirement | no requirement | no requirement | no requirement | T4 | | |
| TIA | 1 | 12 | TIA.1.12 | Data Center (Architectural) | Building construction | Exterior bearing walls | Code allowable | Code allowable | 1 Hour minimum | 4 Hours minimum | T3 | | |
| TIA | 1 | 13 | TIA.1.13 | Data Center (Architectural) | Building construction | Interior bearing walls | Code allowable | Code allowable | 1 Hour minimum | 2 Hour minimum | T4 | | |
| TIA | 1 | 14 | TIA.1.14 | Data Center (Architectural) | Building construction | Exterior nonbearing walls | Code allowable | Code allowable | 1 Hour minimum | 4 Hours minimum | T3 | | |
| TIA | 1 | 15 | TIA.1.15 | Data Center (Architectural) | Building construction | Structural frame | Code allowable | Code allowable | 1 Hour minimum | 2 Hour minimum | T4 | | |
| TIA | 1 | 16 | TIA.1.16 | Data Center (Architectural) | Building construction | Interior non-computer room partition walls | Code allowable | Code allowable | 1 Hour minimum | 1 Hour minimum | T4 | | |
| TIA | 1 | 17 | TIA.1.17 | Data Center (Architectural) | Building construction | Interior computer room partition walls | Code allowable | Code allowable | 1 Hour minimum | 2 Hour minimum | T4 | | |
| TIA | 1 | 18 | TIA.1.18 | Data Center (Architectural) | Building construction | Shaft enclosures | Code allowable | Code allowable | 1 Hour minimum | 2 Hour minimum | T2 | | N/A |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TIA | 1 | 19 | TIA.1.19 | Data Center (Architectural) | Building construction | Floors and floor-ceilings | Code allowable | Code allowable | 1 Hour minimum | 2 Hour minimum | T4 | | |
| TIA | 1 | 20 | TIA.1.20 | Data Center (Architectural) | Building construction | Roofs and roof-ceilings | Code allowable | Code allowable | 1 Hour minimum | 2 Hour minimum | T3 | | |
| TIA | 1 | 21 | TIA.1.21 | Data Center (Architectural) | Building construction | Meet requirements of NFPA 75 | No requirements | yes | yes | yes | T1 | | We believe "yes" but we are not sure. |
| TIA | 1 | 22 | TIA.1.22 | Data Center (Architectural) | Building Components | Vapor barriers for walls and ceiling of computer room | no requirement | yes for walls, no requirement for ceiling | yes | yes | T1 | | Not required for AZ climate |
| TIA | 1 | 23 | TIA.1.23 | Data Center (Architectural) | Building Components | Building entrances with security checkpoints | no requirement | no requirement | yes (primary building entrance manned) | yes (primary building entrance manned) | T4 | | |
| TIA | 1 | 24 | TIA.1.24 | Data Center (Architectural) | Building Components | Access floor panel construction (when provided) | no requirement | no requirement | computer grade all steel | computer grade all steel or computer grade steel with concrete filled | T4 | | |
| TIA | 1 | 25 | TIA.1.25 | Data Center (Architectural) | Building Components | Understructure (when access floor is provided) | no requirement | no requirement | bolted stringer | bolted stringer with 1.2 m x 1.2 m (4 ft x 4 ft) basket weave pattern | T4 | | |
| TIA | 1 | 26 | TIA.1.26 | Data Center (Architectural) | Building Components | Ceilings within computer room areas (when provided) | no requirement | no requirement | no requirement | no requirement | T4 | | |
| TIA | 1 | 27 | TIA.1.27 | Data Center (Architectural) | Building Components | Ceiling Construction | no requirement | no requirement | if provided, suspended with clean room class 10M-100M perforated tile | Suspended with clean room class 100 non-perforated vinyl coated gypsum board tiles tile | T3 | | |
| TIA | 1 | 28 | TIA.1.28 | Data Center (Architectural) | Building Components | Ceiling Height (above raised access floor if provided) | 2.6 m (8.5 ft) minimum | 2.7 m (9.0 ft) minimum | 3 m (10 ft) minimum (not less than 460 mm (18 in) above tallest piece of equipment | 3 m (10 ft) 'minimum (not less than 600 mm/24 in above tallest piece of equipment) | T4 | | |
| TIA | 1 | 29 | TIA.1.29 | Data Center (Architectural) | Roofing | Class | no restrictions | Class A | Class A | Class A | T4 | | |
| TIA | 1 | 30 | TIA.1.30 | Data Center (Architectural) | Roofing | Type | no restrictions | no restrictions | non-redundant with non-combustible deck (no mechanically attached systems) | double redundant with concrete deck (no mechanically attached systems) | T2 | | |
| TIA | 1 | 31 | TIA.1.31 | Data Center (Architectural) | Roofing | Wind uplift resistance | Minimum Code requirements | FM I-90 | FM I-90 minimum | FM I-120 minimum | T4 | | |
| TIA | 1 | 32 | TIA.1.32 | Data Center (Architectural) | Roofing | Roof Slope | Minimum Code requirements | Minimum Code requirements | 1:48 (1/4 in per foot) minimum | 1:24 (1/2 in per foot) minimum | T3 | | |
| TIA | 1 | 33 | TIA.1.33 | Data Center (Architectural) | Doors and Windows | F Fire rating | Minimum Code requirements | Minimum Code requirements | Minimum Code requirements (not less than 3/4 hour at computer room) | Minimum Code requirements (not less than 1 1/2 hour at computer room) | T4 | | |
| TIA | 1 | 34 | TIA.1.34 | Data Center (Architectural) | Doors and Windows | Door size | Minimum Code requirements and not less than 1 m (3 ft) wide and 2.13 m (7 ft in) high | Minimum Code requirements and not less than 1 m (3 ft) wide and 2.13 m (7 ft) high | Minimum Code requirements (not less than 1 m (3 ft) wide into computer, electrical, & mechanical rooms) and not less than 2.13 m (7 ft ) high | Minimum Code requirements (not less than 1.2 m (4 ft) wide into computer, electrical, & mechanical rooms) and not less than 2.13 m (7 ft) high | T3 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TIA | 1 | 35 | TIA.1.35 | Data Center (Architectural) | Doors and Windows | Windows on perimeter of computer room | Allowed with minimum code required fire rating | Allowed with minimum code required fire rating | Interior windows allowed with minimum 1-hour fire rating, no exterior windows allowed | Interior windows allowed with minimum 1-hour fire rating, no exterior windows allowed | T4 | | |
| TIA | 1 | 36 | TIA.1.36 | Data Center (Architectural) | Entry Lobby | Physically separate from other areas of data center | no requirement | yes | yes | yes | T4 | | |
| TIA | 1 | 37 | TIA.1.37 | Data Center (Architectural) | Entry Lobby | Fire separation from other areas of data center | Minimum Code requirements | Minimum Code requirements | Minimum Code requirements (not less than 1 hour) | Minimum Code requirements (not less than 2 hour) | T2 | | #REF! |
| TIA | 1 | 38 | TIA.1.38 | Data Center (Architectural) | Entry Lobby | Security counter | no requirement | no requirement | yes | yes (physically separated) | T4 | | |
| TIA | 1 | 39 | TIA.1.39 | Data Center (Architectural) | Entry Lobby | Single person interlock, portal or other hardware designed to prevent piggybacking or pass back | no requirement | no requirement | yes | yes | T2 | Security manned 24x7x365, anti passback enabled | |
| TIA | 1 | 40 | TIA.1.40 | Data Center (Architectural) | Administrative Offices | Physically separate from other areas of data center | no requirement | yes | yes | yes | T4 | | |
| TIA | 1 | 41 | TIA.1.41 | Data Center (Architectural) | Administrative Offices | Fire separation from other areas of data center | Minimum Code requirements | Minimum Code requirements | Minimum Code requirements (not less than 1 hour) | Minimum Code requirements (not less than 2 hour) | T4 | | |
| TIA | 1 | 42 | TIA.1.42 | Data Center (Architectural) | Security Office | Physically separate from other areas of data center | no requirement | no requirement | yes | yes | T4 | | |
| TIA | 1 | 43 | TIA.1.43 | Data Center (Architectural) | Security Office | Fire separation from other areas of data center | Minimum Code requirements | Minimum Code requirements | Minimum Code requirements (not less than 1 hour) | Minimum Code requirements (not less than 2 hour) | T4 | | |
| TIA | 1 | 44 | TIA.1.44 | Data Center (Architectural) | Security Office | 180-degree peepholes on security equipment and monitoring rooms | No requirement | Yes | Yes | yes | T4 | | |
| TIA | 1 | 45 | TIA.1.45 | Data Center (Architectural) | Security Office | Dedicated and harden security equipment and monitoring rooms | No requirement | Recommended | Recommended | Recommended | T4 | | |
| TIA | 1 | 46 | TIA.1.46 | Data Center (Architectural) | Security Office | Dedicated security room for security equipment and monitoring | No requirement | Yes | Yes, with 16 mm (5/8 in) plywood lined walls and solid core door | Yes, with 16 mm (5/8 in) plywood lined walls and solid core door | T4 | | |
| TIA | 1 | 47 | TIA.1.47 | Data Center (Architectural) | Security Office | Operations Center Physically separate from other areas of data center | no requirement | no requirement | yes | yes | T4 | | |
| TIA | 1 | 48 | TIA.1.48 | Data Center (Architectural) | Security Office | Fire separation from other non-computer room areas of data center | no requirement | no requirement | 1 hour | 2 hour | T4 | | |
| TIA | 1 | 49 | TIA.1.49 | Data Center (Architectural) | Security Office | Proximity to computer room | no requirement | no requirement | indirectly accessible (maximum of 1 adjoining room) | directly accessible | T3 | | |
| TIA | 1 | 50 | TIA.1.50 | Data Center (Architectural) | Restroom and break room | Proximity to computer room and support areas | no requirement | no requirement | If immediately adjacent, provided with leak prevention barrier | Not immediately adjacent and provided with leak prevention barrier | T4 | | |
| TIA | 1 | 51 | TIA.1.51 | Data Center (Architectural) | Restroom and break room | Fire separation from computer room and support areas | Minimum Code requirements | Minimum Code requirements | Minimum Code requirements (not less than 1 hour) | Minimum Code requirements (not less than 2 hour) | T4 | | |
| TIA | 1 | 52 | TIA.1.52 | Data Center (Architectural) | UPS and Battery Rooms | Aisle widths for maintenance, repair, or equipment removal | no requirement | no requirement | Minimum Code requirements (not less than 1 m (3 ft) clear) | Minimum Code requirements (not less than 1.2 m (4 ft) clear) | T4 | | |
| TIA | 1 | 53 | TIA.1.53 | Data Center (Architectural) | UPS and Battery Rooms | Proximity to computer room | no requirement | no requirement | Immediately adjacent | Immediately adjacent | T4 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TIA | 1 | 54 | TIA.1.54 | Data Center (Architectural) | UPS and Battery Rooms | Fire separation from computer room and other areas of data center | Minimum Code requirements | Minimum Code requirements | Minimum Code requirements (not less than 1 hour) | Minimum Code requirements (not less than 2 hour) | T4 | | |
| TIA | 1 | 55 | TIA.1.55 | Data Center (Architectural) | Required Exit Corridors | Fire separation from computer room and support areas | Minimum Code requirements | Minimum Code requirements | Minimum Code requirements (not less than 1 hour) | Minimum Code requirements (not less than 2 hour) | T4 | | |
| TIA | 1 | 56 | TIA.1.56 | Data Center (Architectural) | Required Exit Corridors | Width | Minimum Code requirements | Minimum Code requirements | Minimum Code requirements and not less than 1.2 m (4 ft) clear | Minimum Code requirements and not less than 1.5 m (5 ft) clear) | T4 | | |
| TIA | 1 | 57 | TIA.1.57 | Data Center (Architectural) | Shipping and receiving areas | Shipping and receiving area Physically separate from other areas of data center | No shipping and receiving area provided | No | yes | yes | T4 | | |
| TIA | 1 | 58 | TIA.1.58 | Data Center (Architectural) | Shipping and receiving areas | Fire separation from other areas of data center | Minimum code requirements if shipping and receiving area present | Minimum code requirement | 1 hour | 2 hour | T4 | | |
| TIA | 1 | 59 | TIA.1.59 | Data Center (Architectural) | Shipping and receiving areas | Physical protection of walls exposed to lifting equipment traffic | no requirement | no requirement | yes (minimum 19mm (3/4 in) plywood wainscot) | yes (steel bollards or similar protection) | T4 | | |
| TIA | 1 | 60 | TIA.1.60 | Data Center (Architectural) | Shipping and receiving areas | Number of loading docks | no requirement | 1 per 2500 sq m / 25,000 sq ft of Computer room | 1 per 2500 sq m / 25,000 sq ft of Computer room (2 minimum) | 1 per 2500 sq m / 25,000 sq ft of Computer room (2 minimum) | T4 | | |
| TIA | 1 | 61 | TIA.1.61 | Data Center (Architectural) | Generator and fuel storage areas | Proximity to computer room and support areas | no requirement | no requirement | If within Data Center building, provided with minimum 2 hour fire separation from all other areas | Separate building or exterior weatherproof enclosures with Code required building separation | T4 | | |
| TIA | 1 | 62 | TIA.1.62 | Data Center (Architectural) | Generator and fuel storage areas | Proximity to publicly accessible areas | no requirement | no requirement | 9 m / 30 ft or greater separation | 19 m / 60 ft or greater separation | T2 | | |
| TIA | 2 | 1 | TIA.2.1 | Data Center (Security) | Security | System CPU UPS capacity | na | Building | Building | Building + Battery (8 hour min) | T3 | | |
| TIA | 2 | 2 | TIA.2.2 | Data Center (Security) | Security | Data Gathering Panels (Field Panels) UPS Capacity | na | Building + Battery (4 hour min) | Building + Battery (8 hour min) | Building + Battery (24 hour min) | T4 | Security systems on building UPS | |
| TIA | 2 | 3 | TIA.2.3 | Data Center (Security) | Security | Field Device UPS Capacity | na | Building + Battery (4 hour min) | Building + Battery (8 hour min) | Building + Battery (24 hour min) | T4 | Security systems on building UPS | |
| TIA | 2 | 4 | TIA.2.4 | Data Center (Security) | Security | Security staffing per shift | na | 1 per 3,000 sq m / 30,000 sq ft (1 minimum) | 1 per 2,000 sq m / 20,000 sq ft (2 minimum) | 1 per 2,000 sq m / 20,000 sq ft (3 minimum) | T2 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TIA | 2 | 5 | TIA.2.5 | Data Center (Security) | Security Access Control Monitoring | Generators | industrial grade lock | intrusion detection | card access | card access | T1 | plus camera coverage | |
| TIA | 2 | 6 | TIA.2.6 | Data Center (Security) | Security Access Control Monitoring | UPS, Telephone & MEP Rooms | industrial grade lock | intrusion detection | card access | card access | T4 | | |
| TIA | 2 | 7 | TIA.2.7 | Data Center (Security) | Security Access Control Monitoring | Fiber Vaults | industrial grade lock | intrusion detection | intrusion detection | card access | N/A | Owned/secured by Telco | |
| TIA | 2 | 8 | TIA.2.8 | Data Center (Security) | Security Access Control Monitoring | Emergency Exit Doors | industrial grade lock | monitor | delay egress per code | delay egress per code | T2 | | |
| TIA | 2 | 9 | TIA.2.9 | Data Center (Security) | Security Access Control Monitoring | Accessible Exterior Windows/opening | off site monitoring | intrusion detection (with offsite monitoring during shifts when no security staff is present) | intrusion detection (with offsite monitoring during shifts when no security staff is present) | intrusion detection | T4 | Monitored by 24x7x365 on site security | |
| TIA | 2 | 10 | TIA.2.10 | Data Center (Security) | Security Access Control Monitoring | Security Operations Center | no requirement | no requirement | card access | card access | T4 | | |
| TIA | 2 | 11 | TIA.2.11 | Data Center (Security) | Security Access Control Monitoring | Network Operations Center | no requirement | no requirement | card access | card access | T4 | | |
| TIA | 2 | 12 | TIA.2.12 | Data Center (Security) | Security Access Control Monitoring | Security Equipment Rooms | no requirement | intrusion detection | card access | card access | T4 | | |
| TIA | 2 | 13 | TIA.2.13 | Data Center (Security) | Security Access Control Monitoring | Doors into Computer Rooms | industrial grade lock | intrusion detection | card or biometric access for ingress and egress | card or biometric access for ingress and egress | T4 | | |
| TIA | 2 | 14 | TIA.2.14 | Data Center (Security) | Security Access Control Monitoring | Perimeter building doors | no monitoring | intrusion detection (with offsite monitoring during shifts when no security staff is present) | card access if main entrance, intrusion detection all others | card access all entrance | T3 | | |
| TIA | 2 | 15 | TIA.2.15 | Data Center (Security) | Security Access Control Monitoring | Main door onto computer room floor | industrial grade lock | card access | Single person interlock, portal or other hardware designed to prevent piggybacking or pass back of access credential | single person interlock, portal or other hardware designed to prevent piggybacking or pass back of access credential, preferably with biometrics. | T2 | no man trap but camera covered and biometric | |
| TIA | 2 | 16 | TIA.2.16 | Data Center (Security) | Bullet resistant walls, windows & doors | Security Counter in Lobby | na | na | Level 3 (min) | Level 3 (min) | T2 | | |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TIA | 2 | 17 | TIA.2.17 | Data Center (Security) | Bullet resistant walls, windows & doors | Security Counter in Shipping and Receiving | na | na | na | Level 3 (min) | T3 | | |
| TIA | 2 | 18 | TIA.2.18 | Data Center (Security) | CCTV Monitoring | Building perimeter and parking | no requirement | no requirement | yes | yes | T4 | | |
| TIA | 2 | 19 | TIA.2.19 | Data Center (Security) | CCTV Monitoring | Generators | no requirement | no requirement | yes | yes | T4 | access to mech yard covered | |
| TIA | 2 | 20 | TIA.2.20 | Data Center (Security) | CCTV Monitoring | Access Controlled Doors | no requirement | yes | Yes | Yes | T4 | | |
| TIA | 2 | 21 | TIA.2.21 | Data Center (Security) | CCTV Monitoring | Computer Room Floors | no requirement | no requirement | Yes | Yes | T4 | | |
| TIA | 2 | 22 | TIA.2.22 | Data Center (Security) | CCTV Monitoring | UPS, Telephone & MEP Rooms | no requirement | no requirement | Yes | Yes | T2 | | |
| TIA | 2 | 23 | TIA.2.23 | Data Center (Security) | CCTV | CCTV Recording of all activity on all cameras | no requirement | no requirement | Yes; digital | Yes; digital | T4 | | |
| TIA | 2 | 24 | TIA.2.24 | Data Center (Security) | CCTV | Recording rate (frames per second) | no requirement | no requirement | 20 frames/secs (min) | 20 frames/secs (min) | T4 | | |
| TIA | 3 | 1 | TIA.3.1 | Data Center (Structural) | Structural | Seismic zone -any zone acceptable although it may dictate more costly support mechanisms | no restriction | no restriction | no restriction | no restriction | T4 | | |
| TIA | 3 | 2 | TIA.3.2 | Data Center (Structural) | Structural | Facility designed to seismic zone requirements | no restriction | no restriction | no restriction | In Seismic Zone 0, 1, 2 to Zone 3 requirements. In Seismic Zone 3 & 4 to Zone 4 requirements | T3 | | |
| TIA | 3 | 3 | TIA.3.3 | Data Center (Structural) | Structural | Site Specific Response Spectra - Degree of local Seismic accelerations | no | no | with Operation Status after 10% in 50 year event | with Operation Status after 5% in 100 year event | T1 | No seismic risk in Phx | #REF! |
| TIA | 3 | 4 | TIA.3.4 | Data Center (Structural) | Structural | Importance factor - assists to ensure greater than code design | I=1 | I=1.5 | I=1.5 | I=1.5 | T1 | No seismic risk in Phx | #REF! |
| TIA | 3 | 5 | TIA.3.5 | Data Center (Structural) | Structural | Telecommunications equipment racks/cabinets anchored to base or supported at top and base | no | Base only | Fully braced | Fully braced | T1 | No seismic risk in Phx | #REF! |
| TIA | 3 | 6 | TIA.3.6 | Data Center (Structural) | Structural | | no | no | yes | yes | T1 | Do not understand the question | ? |
| TIA | 3 | 7 | TIA.3.7 | Data Center (Structural) | Structural | Bracing of electrical conduits runs and cable trays | per code | per code w/ Importance | per code w/ Importance | per code w/ Importance | T1 | No seismic risk in Phx | |
| TIA | 3 | 8 | TIA.3.8 | Data Center (Structural) | Structural | Bracing of mechanical system major duct runs | per code | per code w/ Importance | per code w/ Importance | per code w/ Importance | T1 | No seismic risk in Phx | |
| TIA | 3 | 9 | TIA.3.9 | Data Center (Structural) | Structural | Floor loading capacity superimposed live load | 7.2 kPa (150 lbf/sq ft) | 8.4 kPa (175 lbf/sq ft) | 12 kPa (250 lbf/sq ft) | 12 kPa (250 lbf/sq ft) | T4 | | |
| TIA | 3 | 10 | TIA.3.10 | Data Center (Structural) | Structural | Floor hanging capacity for ancillary loads suspended from below | 1.2 kPa (25 lbf/sq ft) | 1.2 kPa (25 lbf/sq ft) | 2.4 kPa (50 lbf/sq ft) | 2.4 kPa (50 lbf/sq ft) | N/A | | |
| TIA | 3 | 11 | TIA.3.11 | Data Center (Structural) | Structural | Concrete Slab Thickness at ground | 127 mm (5 in) | 127 mm (5 in) | 127 mm (5 in) | 127 mm (5 in) | T4 | | |
| TIA | 3 | 12 | TIA.3.12 | Data Center (Structural) | Structural | Concrete topping over flutes for elevated floors | 102 mm (4 in) | 102 mm (4 in ) | 102 mm (4 in) | 102 mm (4 in) | N/A | | |
| TIA | 3 | 13 | TIA.3.13 | Data Center (Structural) | Structural | affects size of anchor which can be installed | no requirement | no requirement | no requirement | no requirement | T4 | | |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TIA | 3 | 14 | TIA.3.14 | Data Center (Structural) | Structural | Building LFRS (Shearwall/Braced | Steel/Conc MF | Conc. Shearwall / Steel BF | Conc. Shearwall / Steel BF | Conc. Shearwall / Steel BF | T1 | No seismic risk in Phx | |
| TIA | 3 | 15 | TIA.3.15 | Data Center (Structural) | Structural | Building Energy Dissipation -Passive | none | none | Passive Dampers | Passive Dampers/Base Isolation | T2 | No seismic risk in Phx | |
| TIA | 3 | 16 | TIA.3.16 | Data Center (Structural) | Structural | Battery/UPS floor vs. building composition. Concrete floors more difficult to upgrade for intense loads. Steel framing with metal deck and fill much more easily upgraded. | PT concrete | CIP Mild Concrete | Steel Deck & Fill | Steel Deck & Fill | T4 | Concrete and rebar | |
| TIA | 3 | 17 | TIA.3.17 | Data Center (Structural) | Structural | Steel Deck & Fill/ PT concrete/ CIP Mild -slabs much more difficult to install anchors | PT | PT concrete | CIP Mild Concrete | Steel Deck & Fill | T4 | Concrete and rebar | |
| TIA | 4 | 1 | TIA.4.1 | Data Center (Electrical) | General | System allows concurrent maintenance | No | Down to but not including UPS output panelboard | Down to but not including power distribution unit | Throughout distribution system | T2 | | |
| TIA | 4 | 2 | TIA.4.2 | Data Center (Electrical) | General | Single Points of Failure | One or more single points of failure for distribution systems serving electrical equipment or mechanical systems | One or more single points of failure for distribution systems serving electrical equipment or mechanical systems | No single points of failure for distribution systems serving electrical equipment or mechanical systems | No single points of failure for distribution systems serving electrical equipment or mechanical systems | T2 | | |
| TIA | 4 | 3 | TIA.4.3 | Data Center (Electrical) | General | Power System Analysis | Short Circuity Study Coordination Study Arc Flash Analysis | Short Circuity Study Coordination Study Arc Flash Analysis | Short Circuity Study Coordination Study Arc Flash Analysis Load Flow Study | Short Circuity Study Coordination Study Arc Flash Analysis Load Flow Study | N/A | We do not do Arc Flash analysis | ? |
| TIA | 4 | 4 | TIA.4.4 | Data Center (Electrical) | General | Computer & Telecommunications Equipment Power Cords | Single Cord Feed with 100% capacity | Single Cord Feed with 100% capacity | Redundant Cord Feed with 100% capacity on remaining cord or cords | Redundant Cord Feed with 100% capacity on remaining cord or cords | T4 | | |
| TIA | 4 | 5 | TIA.4.5 | Data Center (Electrical) | Utility | Utility Entrance | Single Feed | Single Feed | N+1 Redundant Feed | 2N Redundant Feed from different utility substations | T3 | | |
| TIA | 4 | 6 | TIA.4.6 | Data Center (Electrical) | Main Utility Switchboard | Service | Shared | Dedicated | Dedicated | Dedicated | T4 | | |
| TIA | 4 | 7 | TIA.4.7 | Data Center (Electrical) | Main Utility Switchboard | Construction | Panelboard with bolt on circuit breakers Optional | Panelboard with bolt on circuit breakers Optional | Panelboard with bolt on circuit breakers | Panelboard with bolt on circuit breakers | T4 | | |
| TIA | 4 | 8 | TIA.4.8 | Data Center (Electrical) | Main Utility Switchboard | Surge Suppression | Optional | Optional | Yes | Yes | T4 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TIA | 4 | 9 | TIA.4.9 | Data Center (Electrical) | Uninterruptible Power Supply Systems | Redundancy | N | N+1 | N+1 | 2N | T3 | | |
| TIA | 4 | 10 | TIA.4.10 | Data Center (Electrical) | Uninterruptible Power Supply Systems | Topology | Single or Parallel Modules | Single or Parallel Modules with static bypass | Parallel Redundant Modules or Distributed Redundant Modules or Block Redundant System | Parallel Redundant Modules or Distributed Redundant Modules or Block Redundant System | T4 | | |
| TIA | 4 | 11 | TIA.4.11 | Data Center (Electrical) | Uninterruptible Power Supply Systems | Automatic Bypass | None | dedicated maintenance bypass feeder to UPS output switchboard | Dedicated maintenance bypass feeder to UPS output switchboard | Dedicated maintenance bypass feeder to UPS output switchboard | T4 | | |
| TIA | 4 | 12 | TIA.4.12 | Data Center (Electrical) | Uninterruptible Power Supply Systems | Output Power Distribution | Panelboard incorporating standard thermal magnetic trip breakers | Panelboard incorporating standard thermal magnetic trip breakers | Panelboard incorporating circuit breakers that are coordinated under overload and ground fault current condition | Panelboard incorporating circuit breakers that are coordinated under overload and ground fault current condition | T4 | | |
| TIA | 4 | 13 | TIA.4.13 | Data Center (Electrical) | Uninterruptible Power Supply Systems | Battery String | Common String for multiple modules | Dedicated String for each module | Dedicated String for each module | Dedicated String for each module | T4 | | |
| TIA | 4 | 14 | TIA.4.14 | Data Center (Electrical) | Uninterruptible Power Supply Systems | Battery type | 5 year valve regulated lead acid | 10 year valve regulated lead acid or flooded type | 15 year valve regulated lead acid or flooded type | 20 year lead acid flooded type | N/A | | #REF! |
| TIA | 4 | 15 | TIA.4.15 | Data Center (Electrical) | Uninterruptible Power Supply Systems | Battery Minimum Back Up Time | 5 minutes | 7 minutes | 10 minutes | 15 minutes | T4 | | |
| TIA | 4 | 16 | TIA.4.16 | Data Center (Electrical) | Uninterruptible Power Supply Systems | Battery Monitoring System | Optional | Optional | String level by UPS system | Centralized automated system to check each cell for, voltage, and impedance or resistance | T3 | | |
| TIA | 4 | 17 | TIA.4.17 | Data Center (Electrical) | Uninterruptible Power Supply Systems | Flywheel | Allowed | Allowed | Allowed | Allowed | N/A | | |
| TIA | 4 | 18 | TIA.4.18 | Data Center (Electrical) | Uninterruptible Power Supply Systems | Transformer | Optional | K-Rated or Harmonic Canceling | K-Rated or Harmonic Canceling Front Accessible for Maintenance | K-Rated or Harmonic Canceling Front Accessible for Maintenance | T4 | | |
| TIA | 4 | 19 | TIA.4.19 | Data Center (Electrical) | Automatic Static Transfer Switch | Overcurrent Device | N/A | Fuse | Circuit Breaker | Circuit Breaker | T4 | | |
| TIA | 4 | 20 | TIA.4.20 | Data Center (Electrical) | Automatic Static Transfer Switch | Maintenance Bypass Procedure | N/A | Manual Non Guided | Manual Guided | Manual Guided | T1 | 2 ATS's, Elec. Engineer contractor led shut down procedure | T1 ? |
| TIA | 4 | 21 | TIA.4.21 | Data Center (Electrical) | Automatic Static Transfer Switch | Output | N/A | Single Circuit Breaker | Dual Circuit Breaker | Dual Circuit Breaker | T2 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TIA | 4 | 22 | TIA.4.22 | Data Center (Electrical) | Grounding | Lighting protection system | based on risk analysis as per NFPA 780 and insurance requirements. | based on risk analysis as per NFPA 780 and insurance requirements. | Yes | Yes | T4 | | |
| TIA | 4 | 23 | TIA.4.23 | Data Center (Electrical) | Grounding | Service entrance grounds and generator grounds fully conform to NEC | Yes | Yes | Yes | Yes | T4 | | |
| TIA | 4 | 24 | TIA.4.24 | Data Center (Electrical) | Grounding | Lighting fixtures neutral isolated from service entrance derived from lighting transformer for ground fault isolation | No | No | Yes | Yes | T4 | | |
| TIA | 4 | 25 | TIA.4.25 | Data Center (Electrical) | Grounding | Data center grounding infrastructure in computer room | Optional | Optional | Yes | Yes | T4 | | |
| TIA | 4 | 26 | TIA.4.26 | Data Center (Electrical) | Computer Room Emergency Power Off (EPO) System | Installation | Do not install if not required by authorities having jurisdiction | Do not install if not required by authorities having jurisdiction | Do not install if not required by authorities having jurisdiction | Do not install if not required by authorities having jurisdiction | T4 | We do have EPO installed | |
| TIA | 4 | 27 | TIA.4.27 | Data Center (Electrical) | Computer Room Emergency Power Off (EPO) System | Test Mode | Optional | Optional | Yes | Yes | T2 | | |
| TIA | 4 | 28 | TIA.4.28 | Data Center (Electrical) | Computer Room Emergency Power Off (EPO) System | Alarm | Optional | Optional | Yes | Yes | T4 | | |
| TIA | 4 | 29 | TIA.4.29 | Data Center (Electrical) | Computer Room Emergency Power Off (EPO) System | Abort Swtich | Optional | Optional | Yes | Yes | T2 | Have EPO enable for life safety | |
| TIA | 4 | 30 | TIA.4.30 | Data Center (Electrical) | Central Power Monitoring | Monitored Points | None | Utility<br>UPS<br>Generator | Utility<br>Main Transformer<br>UPS<br>Generator<br>Feeder Circuit Breakers<br>Automatic Static Transfer Swtich<br>PDU<br>Automatic Transfer Switches | Utility<br>Main Transformer<br>UPS<br>Generator<br>Feeder Circuit Breakers<br>Automatic Static Transfer Swtich<br>PDU<br>Automatic Transfer Switches | T2 | | |
| TIA | 4 | 31 | TIA.4.31 | Data Center (Electrical) | Central Power Monitoring | Notification Method | N/A | Control Room Console | Control Room Console<br>Pager<br>Email<br>Text Message | Control Room Console<br>Pager<br>Email<br>Text Message | T2 | Monitored 24x7x365, escalation driven from monitoring personnel | |
| TIA | 4 | 32 | TIA.4.32 | Data Center (Electrical) | Battery Room | Separate from UPS/Switchgear Equipment Rooms | No | Yes | Yes | Yes | T4 | | |
| TIA | 4 | 33 | TIA.4.33 | Data Center (Electrical) | Battery Room | Individual Battery Strings Isolated from Each Other | No | Yes | Yes | Yes | T1 | | |
| TIA | 4 | 34 | TIA.4.34 | Data Center (Electrical) | Battery Room | Shatterproof Viewing Glass in Battery Room Door | No | No | No | Yes | T3 | | |
| TIA | 4 | 35 | TIA.4.35 | Data Center (Electrical) | Standby Generating System | Generator Sizing | Sized for UPS System only | Sized for UPS & mechanical system | Sized for total building load N+1 redundancy | Sized for total building load with 2N redundancy | T3 | | |
| TIA | 4 | 36 | TIA.4.36 | Data Center (Electrical) | Standby Generating System | Generators on Single Bus | Yes | Yes | Yes | No | T3 | | |
| TIA | 4 | 37 | TIA.4.37 | Data Center (Electrical) | Loadbank | Installation | None | Provision for Portable | Provision for Portable | Permanent | T3 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TIA | 4 | 38 | TIA.4.38 | Data Center (Electrical) | Loadbank | Equipment Tested | N/A | Generator | Generator UPS | Generator UPS | T4 | | |
| TIA | 4 | 39 | TIA.4.39 | Data Center (Electrical) | Loadbank | Auto Shutdown | N/A | None | Automatic upon failure of utility | Automatic upon failure of utility | T4 | | |
| TIA | 4 | 40 | TIA.4.40 | Data Center (Electrical) | Testing | Factory Acceptance Testing | Optional | Optional | Yes | Yes | T4 | | |
| TIA | 4 | 41 | TIA.4.41 | Data Center (Electrical) | Testing | Site Circuit breaker testing | Optional | Optional | Contact Resistance test of all circuit breakers in critical and essential paths, 225 Amps and higher | Contact Resistance test of all circuit breakers in critical and essential paths, 225 Amps and higher | T2 | | |
| TIA | 4 | 42 | TIA.4.42 | Data Center (Electrical) | Testing | Commissioning | Optional | Component level System level | Component level System level Integrated System | Component level System level Integrated System | T4 | For new install or upgrade of critical power infrastructure | |
| TIA | 4 | 43 | TIA.4.43 | Data Center (Electrical) | Equipment Maintenance | Maintenance Staff | Onsite Day Shift only. On-call at other times | Onsite Day Shift only. On-call at other times | Onsite 24 hrs M-F, on-call on weekends | Onsite 24/7 | T2 | | |
| TIA | 4 | 44 | TIA.4.44 | Data Center (Electrical) | Equipment Maintenance | Preventative Maintenance | None | None | Limited preventative maintenance program | Comprehensive preventative maintenance program | T4 | | |
| TIA | 5 | 1 | TIA.5.1 | Data Center (Electrical) | Equipment Maintenance | Facility Training Programs | None | None | Comprehensive training program | Comprehensive training program including manual operation procedures if it is necessary to bypass control system | T3 | | |
| TIA | 5 | 2 | TIA.5.2 | Data Center (Mechanical) | General | Routing of water or drain piping not associated with the data center equipment in data center spaces | Permitted but not recommended | Permitted but not recommended | Not permitted | Not permitted | T4 | | |
| TIA | 5 | 3 | TIA.5.3 | Data Center (Mechanical) | General | Positive pressure in computer room and associated spaces relative to outdoors and non-data center spaces | No requirement | Yes | Yes | Yes | T4 | | |
| TIA | 5 | 4 | TIA.5.4 | Data Center (Mechanical) | General | Floor drains in computer room for condensate drain water, humidifier flush water, and sprinkler discharge water | Yes | Yes | Yes | Yes | T4 | | |
| TIA | 5 | 5 | TIA.5.5 | | | Mechanical systems on standby generator | No requirement | Yes | Yes | Yes | T4 | | |
| TIA | 5 | 6 | TIA.5.6 | Data Center (Mechanical) | Water-Cooled System | Indoor Terminal Air Conditioning Units | No redundant air conditioning units | One redundant AC Unit per critical area | Qty. of AC Units sufficient to maintain critical area during loss of one source of electrical power | Qty. of AC Units sufficient to maintain critical area during loss of one source of electrical power | T4 | | |
| TIA | 5 | 7 | TIA.5.7 | Data Center (Mechanical) | Water-Cooled System | Humidity Control for Computer Room | No requirements | Humidification provided | Humidification provided | Humidification provided | T4 | | |
| TIA | 5 | 8 | TIA.5.8 | Data Center (Mechanical) | Water-Cooled System | Electrical Service to Mechanical Equipment | Single path of electrical power to AC equipment | Single path of electrical power to AC equipment | Multiple paths of electrical power to AC equipment. Connected in checkerboard fashion for cooling redundancy | Multiple paths of electrical power to AC equipment. Connected in checkerboard fashion for cooling redundancy | T3 | Not sure of "checkerboard" definition but we have dual feeds. | |
| TIA | 5 | 9 | TIA.5.9 | Data Center (Mechanical) | Water-Cooled System Heat Rejection | Dry-coolers (where applicable) | No redundant dry coolers | One redundant dry cooler per system | Qty. of dry coolers sufficient to provide minimal temporary capacity to critical area during loss of one source of electrical power | Qty. of dry coolers sufficient to maintain critical area during loss of one source of electrical power | N/A | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TIA | 5 | 10 | TIA.5.10 | Data Center (Mechanical) | Water-Cooled System Heat Rejection | Closed-Circuit Fluid Coolers (where applicable) | No redundant fluid coolers | One redundant fluid cooler per system | Qty. of dry coolers sufficient to provide minimal temporary capacity to critical area during loss of one source of electrical power | Qty. of fluid coolers sufficient to maintain critical area during loss of one source of electrical power | T4 | | |
| TIA | 5 | 11 | TIA.5.11 | Data Center (Mechanical) | Water-Cooled System Heat Rejection | Circulating Pumps | No redundant condenser water pumps | One redundant condenser water pump per system | Qty. of dry coolers sufficient to provide minimal temporary capacity to critical area during loss of one source of electrical power | Qty. of condenser water pumps sufficient to maintain critical area during loss of one source of electrical power | T4 | | |
| TIA | 5 | 12 | TIA.5.12 | Data Center (Mechanical) | Water-Cooled System Heat Rejection | Piping System | Single path condenser water system | Single path condenser water system | Headered parallel piped condenser water system | Dual path condenser water system | T2 | | |
| TIA | 5 | 13 | TIA.5.13 | Data Center (Mechanical) | Chilled Water System | Indoor Terminal Air Conditioning Units | No redundant air conditioning units | One redundant AC Unit per critical area | Qty. of AC Units sufficient to provide minimal temporary capacity to critical area during loss of one source of electrical power | Qty. of AC Units sufficient to maintain critical area during loss of one source of electrical power | T4 | | |
| TIA | 5 | 14 | TIA.5.14 | Data Center (Mechanical) | Chilled Water System | Humidity Control for Computer Room | No requirements | Humidification provided | Humidification provided | Humidification provided | T4 | | |
| TIA | 5 | 15 | TIA.5.15 | Data Center (Mechanical) | Chilled Water System | Electrical Service to Mechanical Equipment | Single path of electrical power to AC equipment | Single path of electrical power to AC equipment | Multiple paths of electrical power to AC equipment | Multiple paths of electrical power to AC equipment | T4 | | |
| TIA | 5 | 16 | TIA.5.16 | Data Center (Mechanical) | Chilled Water System Heat Rejection | Chilled Water Piping System | Single path chilled water system | Single path chilled water system | Dual path ladder loop chilled water system with isolation valves | Dual path chilled water system | T2 | | |
| TIA | 5 | 17 | TIA.5.17 | Data Center (Mechanical) | Chilled Water System Heat Rejection | Chilled Water Pumps | No redundant chilled water pumps | One redundant chilled water pump per system | Qty. of chilled water pumps sufficient to provide minimal temporary capacity to critical area during loss of one source of electrical power | Qty. of chilled water pumps sufficient to maintain critical area during loss of one source of electrical power | T4 | | |
| TIA | 5 | 18 | TIA.5.18 | Data Center (Mechanical) | Chilled Water System Heat Rejection | Air-Cooled Chillers | No redundant chiller | One redundant chiller per system | Qty. of chilled water pumps sufficient to provide minimal temporary capacity to critical area during loss of one source of electrical power | Qty. of chillers sufficient to maintain critical area during loss of one source of electrical power | N/A | | |
| TIA | 5 | 19 | TIA.5.19 | Data Center (Mechanical) | Chilled Water System Heat Rejection | Water-cooled Chillers | No redundant chiller | One redundant chiller per system | Qty. of chilled water pumps sufficient to provide minimal temporary capacity to critical area during loss of one source of electrical power | Qty. of chillers sufficient to maintain critical area during loss of one source of electrical power | N/A | | |
| TIA | 5 | 20 | TIA.5.20 | Data Center (Mechanical) | Chilled Water System Heat Rejection | Cooling Towers | No redundant cooling tower | One redundant cooling tower per system | Qty. of chilled water pumps sufficient to provide minimal temporary capacity to critical area during loss of one source of electrical power | Qty. of cooling towers sufficient to maintain critical area during loss of one source of electrical power | T4 | | |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TIA | 5 | 21 | TIA.5.21 | Data Center (Mechanical) | Chilled Water System Heat Rejection | Condenser Water Pumps | No redundant condenser water pumps | One redundant condenser water pump per system | Qty. of chilled water pumps sufficient to provide minimal temporary capacity to critical area during loss of one source of electrical power | Qty. of condenser water pumps sufficient to maintain critical area during loss of one source of electrical power | T4 | | |
| TIA | 5 | 22 | TIA.5.22 | Data Center (Mechanical) | Chilled Water System Heat Rejection | Condenser Water Piping System | Single path condenser water system | Single path condenser water system | Headered parallel piped condenser water system | Dual path condenser water system | T2 | | |
| TIA | 5 | 23 | TIA.5.23 | Data Center (Mechanical) | Air-Cooled System | Indoor Terminal Air Conditioning Units/Outdoor Condensers | No redundant air conditioning units | One redundant AC Unit per critical area | Qty. of AC Units sufficient to provide minimal temporary capacity to critical area during loss of one source of electrical power | Qty. of AC Units sufficient to maintain critical area during loss of one source of electrical power | T4 | | |
| TIA | 5 | 24 | TIA.5.24 | Data Center (Mechanical) | Air-Cooled System | Electrical Service to Mechanical Equipment | Single path of electrical power to AC equipment | Single path of electrical power to AC equipment | Multiple paths of electrical power to AC equipment | Multiple paths of electrical power to AC equipment | N/A | | #REF! |
| TIA | 5 | 25 | TIA.5.25 | Data Center (Mechanical) | Air-Cooled System | Humidity Control for Computer Room | No requirements | Humidification provided | Humidification provided | Humidification provided | T4 | | |
| TIA | 5 | 26 | TIA.5.26 | Data Center (Mechanical) | HVAC Control System | HVAC Control System | Control system failure will interrupt cooling to critical areas | Control system failure will not interrupt cooling to critical areas | Control system failure will not interrupt cooling to critical areas | Control system failure will not interrupt cooling to critical areas | T4 | | |
| TIA | 5 | 27 | TIA.5.27 | Data Center (Mechanical) | HVAC Control System | Power Source to HVAC Control System | Single path of electrical power to HVAC control system | Redundant, UPS electrical power to BMS Control | Redundant, UPS electrical power to BMS Control | Redundant, UPS electrical power to BMS Control | T4 | | |
| TIA | 5 | 28 | TIA.5.28 | Data Center (Mechanical) | Plumbing (for water-cooled heat rejection) | Water | Single water supply, with no on-site back-up storage | Dual sources of water, or one source + on-site storage | Dual sources of water, or one source + on-site storage | Dual sources of water, or one source + on-site storage | T1 | | |
| TIA | 5 | 29 | TIA.5.29 | Data Center (Mechanical) | Plumbing (for water-cooled heat rejection) | Points of Connection to Condenser Water System | Single point of connection | Single point of connection | Two points of connection | Two points of connection | N/A | | #REF! |
| TIA | 5 | 30 | TIA.5.30 | Data Center (Mechanical) | Fuel Oil System | Bulk Storage Tanks | Single storage tank | Single storage tanks | Multiple storage tanks | Multiple storage tanks | T4 | | |
| TIA | 5 | 31 | TIA.5.31 | Data Center (Mechanical) | Fuel Oil System | Storage Tank Pumps and Piping | Single pump and/or supply pipe | Multiple pumps, multiple supply pipes | Multiple pumps, multiple supply pipes | Multiple pumps, multiple supply pipes | T4 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TIA | 5 | 32 | TIA.5.32 | Data Center (Mechanical) | Fire Suppression | Fire detection system | no | yes | yes | yes | T4 | | |
| TIA | 5 | 33 | TIA.5.33 | Data Center (Mechanical) | Fire Suppression | Fire sprinkler system | When required | Pre-action (when required) | Pre-action (when required) | Pre-action (when required) | T4 | | |
| TIA | 5 | 34 | TIA.5.34 | Data Center (Mechanical) | Fire Suppression | Gaseous suppression system | no | no | clean agents listed in NFPA 2001 | clean agents listed in NFPA 2001 | T4 | Halon | |
| TIA | 5 | 35 | TIA.5.35 | Data Center (Mechanical) | Fire Suppression | Early Warning Smoke Detection System | no | yes | yes | yes | T4 | | |
| TIA | 5 | 36 | TIA.5.36 | Data Center (Mechanical) | Fire Suppression | Water Leak Detection System | no | yes | yes | yes | T4 | | |

## SOV Consolidated Non-Functional Requirements Traceability Matrix (RTM)

### Infrastructure

| Base | Level | Sub | Req ID New | Focus | Specifics | Requirement Description | Notes | Evidence |
|---|---|---|---|---|---|---|---|---|
| H2 | 1 | 1 | H2.1.1 | Infrastructure | General | Hosting Provider will deliver infrastructure and related services from within its approved Data Centers. | | |
| H2 | 1 | 2 | H2.1.2 | Infrastructure | General | Hosting Provider infrastructure will consist of dedicated servers, operating systems with shared local area network equipment, firewalls, routers, load balancers and any related equipment (shared or dedicated as required) and provided software | | |
| H2 | 1 | 3 | H2.1.3 | Infrastructure | General | Hosting Provider is solely responsible for procuring, managing and maintaining infrastructure, whether within Hosting Provider's Data Centers or Hosting Provider equipment deployed at Customer sites. | | |
| H2 | 1 | 4 | H2.1.4 | Infrastructure | General | Hosting Provider is also be solely responsible for acquiring and maintaining Wide Area Network (WAN) connectivity between Customer's site and Hosting Provider's Data Centers. | | |
| H2 | 1 | 5 | H2.1.5 | Infrastructure | General | Hosting Provider infrastructure applies to Production Environments, Production Support Environments, and Non-Production Environments managed for Customer. | | |
| H2 | 1 | 6 | H2.1.6 | Infrastructure | Acqusition and Provisioning | The Provisioning Release Plan will be used as the basis to install and configure the hardware, network, storage and software required for the environments. | | |
| H2 | 1 | 7 | H2.1.7 | Infrastructure | Acqusition and Provisioning | Hosting Provider will procure, install, and configure the required hardware in accordance with the Provisioning Release Plan | | |
| H2 | 1 | 8 | H2.1.8 | Infrastructure | Acqusition and Provisioning | Hosting Provider will install Hosting Provider's Certified Configuration onto each provisioned Server | | |
| H2 | 1 | 9 | H2.1.9 | Infrastructure | Acqusition and Provisioning | Hosting Provider will provide a VPN devices to be installed within Customer's internal network; or, allow installation of the Hosting Provider-approved Customer-provided Network Equipment in accordance with the network architecture solution approved by Hosting Provider | | |
| H2 | 1 | 10 | H2.1.10 | Infrastructure | Acqusition and Provisioning | Hosting Provider will Provide Internal IP address management, router table management, switch administration and firewall administration within Hosting Provider's Data Center(s) | | |
| H2 | 1 | 11 | H2.1.11 | Infrastructure | Acqusition and Provisioning | Hosting Provider will enable "public" Internet access for the applicable Hosting Provider Programs per the Provisioning Release Plan, and install a DMZ Server(s) per the Infrastructure Requirements Document | | |
| H2 | 1 | 12 | H2.1.12 | Infrastructure | Acqusition and Provisioning | Hosting Provider will install and manage required Third Party Software | | |
| H2 | 1 | 13 | H2.1.13 | Infrastructure | Acqusition and Provisioning | Hosting Provider will ensure implementation/deployment plans are aligned with the Provisioning Release Plan | | |
| H2 | 1 | 14 | H2.1.14 | Infrastructure | Availability Management | Hosting Provider will provide Availability Management functions and data to the Customer. | | |
| H2 | 1 | 15 | H2.1.15 | Infrastructure | Availability Management | Hosting Provider will utilize monitoring tools as part of Availability Management to identify actual or potential Incidents affecting availability, and take action to prevent or minimize such impact. Customer must be notified when incidents are identified affecting Environment availability. | | |
| H2 | 1 | 16 | H2.1.16 | Infrastructure | Availability Management | Hosting Provider will perform Problem Management analysis and make recommendations to Customer of activities that may enhance service quality and reduce recurrence of Incidents affecting availability | | |
| H2 | 1 | 17 | H2.1.17 | Infrastructure | Availability Management | Hosting Provider will maintain availability for all Environments, Applications, and software products running in the Hosting Provider Data Center(s) regardless of whether the Applications or software products were provided by and/or licensed to Hosting Provider. | | |
| H2 | 1 | 18 | H2.1.18 | Infrastructure | Availability Management | Hosting Provider will manage ISP/Network connectivity between Customer's Data Center and Hosting Provider's Data Center, providing network characteristics sufficient to meet contractually defined Service Level Agreement(s). | | |
| H2 | 1 | 19 | H2.1.19 | Infrastructure | General | Hosting Provider solution will utilize industry standard hardware(storage, servers, switches, firewalls, load balancers). | | |
| H2 | 1 | 20 | H2.1.20 | Infrastructure | General | Hosting Provider will utilize industry standard virtualization technologies, and will deploy said virtualization technologies following the best practices of the selected virtualization vendor(s). | | |
| H2 | 1 | 21 | H2.1.21 | Infrastructure | General | Hosting Provider will build Customers infrastructure utilizing physical and virtual separation and components | | |
| H2 | 1 | 22 | H2.1.22 | Infrastructure | Design | Hosting Provider will assist Customer in preparing the detailed infrastructure requirements | | |
| H2 | 1 | 23 | H2.1.23 | Infrastructure | Design | | | |
| H2 | 1 | 24 | H2.1.24 | Infrastructure | Design | Hosting Provider will utilize Customer requirements to design the Hosting Provider Environments and prepare a Provisioning Release Plan. Hosting Provider will then review the Provisioning Release Plan with the Customer. | | |
| H2 | 1 | 25 | H2.1.25 | Infrastructure | Design | Hosting Provider will provide Customer with network capacity recommendations for connectivity between Hosting Provider's Data Center and Customer's premises | | |
| H2 | 1 | 26 | H2.1.26 | Infrastructure | Design | Hosting Provider solution architecture including physical and virtual infrastructure, firewall, load balancers, etc. proposed for individual production and non-production environments will be produced by Customer and approved by Hosting Provider. (refer to visio Customer Environment Diagrams (Production, Disaster Recovery, Staging, Testing, etc.) | | |
| H2 | 1 | 27 | H2.1.27 | Infrastructure | Design | Hosting Provider will Collect and document, and publish all infrastructure/environments under Hosting Provider management | | |
| H2 | 1 | 28 | H2.1.28 | Infrastructure | Environments | Hosting Provider will implement a high available Production Environment per Customers Production, Environment Diagram. | | |
| H2 | 1 | 29 | H2.1.29 | Infrastructure | Environments | (PRODUCTION) Hosting Provider will implement a high available Production Environment per Customers Production Environment Diagram. | | |

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| H2 | 1 | 30 | H2.1.30 | Infrastructure | Environments | (STAGING) Hosting Provider will implement a high available Staging Environment (mirrors PRODUCTION) per Customers Staging Environment Diagram. | | |
| H2 | 1 | 31 | H2.1.31 | Infrastructure | Environments | (DISASTER RECOVERY(DR)) Hosting Provider will implement a high available DR Environment (mirrors PRODUCTION) per Customers DR Environment Diagram. | | |
| H2 | 1 | 32 | H2.1.32 | Infrastructure | Environments | (TEST) Hosting Provider will implement a Non high available TEST Environment per Customers TEST Environment Diagram. Non Production environments will be design at the same level of security as PRODUCTION and will contain the same applications and services as PRODUCTION without the high availability requirements. | | |
| H2 | 1 | 33 | H2.1.33 | Infrastructure | Environments | (DEV) Hosting Provider will implement a Non high available DEV Environment per Customers DEV Environment Diagram. Non Production environments will be design at the same level of security as PRODUCTION and will contain the same applications and services as PRODUCTION without the high availability requirements. | | |
| H2 | 1 | 34 | H2.1.34 | Infrastructure | Environments | (TRAINING) Hosting Provider will implement a Non high available TRAINING Environment per Customers TRAINING Environment Diagram. Non Production environments will be design at the same level of security as PRODUCTION and will contain the same applications and services as PRODUCTION without the high availability requirements. | | |
| H2 | 1 | 35 | H2.1.35 | Maintenance and Operations | Design | The Environments shall be scalable, enterprise-ready applications. The Environments shall support the deployment of other various types of distributed applications, and shall be constructed using best practices based on Service Oriented Architectures (SOA) | | |

## SOV Consolidated Non-Functional Requirements Traceability Matrix (RTM)

### Networking

| Base | Level | Sub | Req ID New | Focus | Specifics | Requirement Description | Notes | Evidence |
|---|---|---|---|---|---|---|---|---|
| H3 | 1 | 1 | H3.1.1 | Network | Bandwidth | Network bandwidth must be monitored and adjusted as program usage grows and changes. | | |
| H3 | 1 | 2 | H3.1.2 | Network | Bandwidth | Hosting Provider shall implement minimum bandwidth requirements as a starting point for network sizing deployment. | | |
| H3 | 1 | 3 | H3.1.3 | Network | Design | Hosting Provider is responsible for the network design and must provide network connection configuration, including a detailed cabling diagram for the network connections between Customer and Hosting Provider data center locations. | | |
| H3 | 1 | 4 | H3.1.4 | Network | Design | Hosting Provider shall provide public Internet addresses for devices that require Internet access, and Hosting Provider shall provide public addresses for equipment interfaces that connect to the Hosting Provider network. | | |
| H3 | 1 | 5 | H3.1.5 | Network | Design | If the Environment is supported by the (Hosting Provider Internal Service Network **(HPISN)**), all access into the Environment must traverse a firewall designed to validate the communications being attempted. The firewall performs this validation by recognizing protocols and verifying the acceptability of ranges of source and destination IP addresses. | | |
| H3 | 1 | 6 | H3.1.6 | Network | DMZ | If Customer chooses to access the Hosting Provider Programs via the public Internet, service will be deployed on DMZ Server(s) for Hosting Provider Managed Applications. | | |
| H3 | 1 | 7 | H3.1.7 | Network | DMZ | Hosting Provider Programs accessible from the public Internet shall be deployed on DMZ Servers for Hosting Provider Managed applications. | | |
| H3 | 1 | 8 | H3.1.8 | Network | DNS | Hosting Provider DNS Standards require the use of a CNAME alias in Customer's external DNS rather than an A record to the IP address to prevent the need for future modifications on Customer's side. This is required so that Hosting Provider can change the server IP addresses as required due to upgrades, relocations, and disaster recovery operations. | | |
| H3 | 1 | 9 | H3.1.9 | Network | DNS | For Hosting Provider personnel to support the Hosting Provider Programs, the applications URL or hostnames must be resolvable in Customer's external DNS. | | |
| H3 | 1 | 10 | H3.1.10 | Network | DNS | Hosting Provider will not utilize hidden or split DNS solutions that impede operations, complicate support and are not valid security solutions. | | |
| H3 | 1 | 11 | H3.1.11 | Network | DNS | Hosting Provider will not utilize DNS sub-domain registrations. Hosting Provider follows and supports RFC 1178, RFC 952, and RFC 987 for hostname registration. | | |
| H3 | 1 | 12 | H3.1.12 | Network | DNS | Hosting Provider shall register the hostnames on an individual basis as part of the **HPISN** DNS Servers so that Hosting Provider does not have to use hostname entries on the desktop, and Hosting Provider can enforce accountability for hosts that are supported at Customer's site. | | |
| H3 | 1 | 13 | H3.1.13 | Network | DNS | Hosting Provider will configure the DNS to use the default Hosting Provider domain for application URLs. This URL is registered as a canonical name (CNAME) DNS record pointing to the Server address assigned to the Customer URL. | | |
| H3 | 1 | 14 | H3.1.14 | Network | DNS | Hosting Provider shall maintain both the A and the CNAME record on Hosting Provider DNS servers. Host and Domain Name DNS Record Type Data Values. | | |
| H3 | 1 | 15 | H3.1.15 | Network | DNS | Customer may use its own domain for its URL, such as portal.company.com. {This is accomplished with a CNAME record entry on Customer's DNS server and an A record on Hosting Provider's DNS servers.} | | |
| H3 | 1 | 16 | H3.1.16 | Network | General | Customer shall access the Hosting Provider Programs through a URL entered in a Web browser. | | |
| H3 | 1 | 17 | H3.1.17 | Network | General | Hosting Provider will ensure that all network devices and links are properly sized and configured and are running optimally. | | |
| H3 | 1 | 18 | H3.1.18 | Network | Hosting Provider Internal Service Network | Hosting Provider (Hosting Provider Internal Service Network (**HPISN**)) will use firewall, VPN and syslog information to report on Hosting Provider personnel activity. The information captured in the report includes the following: User ID, User IP address by VPN concentrator, IP of system to which the user is connecting to, duration of the connection (in seconds), date and time. | | |
| H3 | 1 | 19 | H3.1.19 | Network | Hosting Provider Internal Service Network | All Hosting Provider personnel must connect to the **HPISN** using a software VPN client. After the Hosting Provider employee initiates a software VPN session, the employee must enter a user name and password. When authentication is successful, the Hosting Provider employee is assigned a static IP address for that particular VPN concentrator. The IP addresses are bound to the user identity and not, for example, to the MAC address. IP spoofing and other threats are reduced because the client software enforces the IP assigned by the authentication server. | | |
| H3 | 1 | 20 | H3.1.20 | Network | Hosting Provider Internal Service Network | Hosting Provider **HPISN** is designed to provide appropriate Hosting Provider personnel secure network access to Servers used to provide Hosting Provider Services. | | |
| H3 | 1 | 21 | H3.1.21 | Network | Hosting Provider Internal Service Network | Hosting Provider maintains a dedicated support network (Hosting Provider Internal Support Network(HPISN)) that is segregated from Hosting Provider's Intranet. The network is comprised of a firewall, VPN, intrusion detection, authentication, reporting, and DNS. This isolated network is the standard Network Connectivity option for Hosting Provider personnel to connect to the Environment. | | |

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| H3 | 1 | 22 | H3.1.22 | Network | Hosting Provider Internal Service Network | The HPISN shall utilize redundant firewalls, intrusion detection systems (IDS), syslog and VPN technologies to secure the Environment. Default-deny rule sets shall be enforced by the firewall security policy, and an IDS shall monitor any potential violations of the predefined rules. In addition, the Hosting Provider shall be responsible for engaging a third party assessment vendor to perform periodic assessments of the Environment and deliver or review reports with the Customer | | |
| H3 | 1 | 23 | H3.1.23 | Network | Hosting Provider Internal Service Network | The HPISN architecture shall assign static IP addresses to individual Hosting Provider personnel. As each user IP passes through the HPISN firewalls, Hosting Provider shall log and report the session activity to the Environment. | | |
| H3 | 1 | 24 | H3.1.24 | Network | Hosting Provider Internal Service Network | Hosting Provider is responsible for access control into Hosting Provider's Data Centers and to the Environment. This access control is designed to limit access to the Environment to Customer's network connections. | | |
| H3 | 1 | 25 | H3.1.25 | Network | Hosting Provider Internal Service Network | Hosting Provider personnel shall utilize the **HPISN** to connect to servers located at Customer's Data Center. Customer is responsible for access control into Customer's Data Center. | | |
| H3 | 1 | 26 | H3.1.26 | Network | Hosting Provider Internal Service Network | Hosting Provider personnel connect to the Data Center(s) using the **HPISN** dedicated support network. | | |
| H3 | 1 | 27 | H3.1.27 | Network | IDS | Hosting Provider shall employ IDS to provide continuous surveillance for intercepting and responding to security events as they are identified. Alerts shall be forwarded to Hosting Provider's IT security and the Hosting Provider Service Desk for review and response to potential threats. | | |
| H3 | 1 | 28 | H3.1.28 | Network | IP addresses | **HPISN** syslog reports show individual IP addresses of users that access the Environment. Hosting Provider captures the individual user IP address information in syslog before the address is translated to Customer. Customer may request a syslog report on a monthly basis. | | |
| H3 | 1 | 29 | H3.1.29 | Network | IP addresses | Hosting Provider can send the IP addresses of Hosting Provider personnel to Customer, encapsulated in subnet ranges. | | |
| H3 | 1 | 30 | H3.1.30 | Network | IP Addresses | Hosting Provider will ensure that only routable IP addresses are presented to Hosting Provider | | |
| H3 | 1 | 31 | H3.1.31 | Network | IP Addresses | Hosting Provider will specify IP addresses to route to Hosting Provider's Data Center(s) | | |
| H3 | 1 | 32 | H3.1.32 | Network | IP addresses | Hosting Provider shall recognize that the use of private addresses is a common practice. Network Address Translation (NAT) and Port Address Translation (PAT) can be used to map private addresses to public addresses. Hosting Provider will aid in providing the public IP addresses and for performing the NAT/PAT. | | |
| H3 | 1 | 33 | H3.1.33 | Network | IP addresses | One-to-one static NAT must be used for all network devices, including, without limitation, Customer's printers or print servers to which Hosting Provider will initiate a connection. PAT is allowed for any network device that initiates the connection with Hosting Provider, such as User workstations connecting to the Hosting Provider Programs. | | |
| H3 | 1 | 34 | H3.1.34 | Network | IP addresses | Hosting Provider will perform the required translations for NAT if used. | | |
| H3 | 1 | 35 | H3.1.35 | Network | IP addresses | Hosting Provider will provide a list of IP addresses for Customer to route over the Transaction Link or Management Link. | | |
| H3 | 1 | 36 | H3.1.36 | Network | IP addresses | To avoid IP address conflicts, Hosting Provider will only route network traffic to globally unique public IP addresses registered through one of the regional Internet registry organizations. Hosting Provider will not route traffic to private IP addresses | | |
| H3 | 1 | 37 | H3.1.37 | Network | Latency | Hosting Provider will utilize network providers that can provide circuits with documented latency from Customer's to Hosting Provider's Data Centers of less than 100ms from within the U.S. | | |
| H3 | 1 | 38 | H3.1.38 | Network | Metrics | Hosting Provider will provide recommendations for network metrics | | |
| H3 | 1 | 39 | H3.1.39 | Network | Monitoring | Hosting Provider will monitor network usage and resize as appropriate | | |
| H3 | 1 | 40 | H3.1.40 | Network | Performance | Hosting Provider must determine its peak usage for each program and continually monitor its network traffic. After determining the correct network capacity for peak loads, Hosting Provider shall upgrade network links that exceed 80 percent of network capacity during peak usage. | | |
| H3 | 1 | 41 | H3.1.41 | Network | Performance | Hosting Provider will provide network circuits that meet Hosting Provider's recommended bandwidth, latency, and error rate to deliver Hosting Provider Services. | | |
| H3 | 1 | 42 | H3.1.42 | Network | Performance | Hosting Provider will provide Internet network circuits in accordance with Hosting Provider Data Center bandwidth and latency requirements | | |
| H3 | 1 | 43 | H3.1.43 | Network | Performance | --- | | |
| H3 | 1 | 44 | H3.1.44 | Network | Personnel | Hosting Provider authorization for Hosting Provider personnel to access the Environment is comprised of the following two components: Network authorization, System authorization. | | |
| H3 | 1 | 45 | H3.1.45 | Network | Routing | Hosting Provider will route traffic to Customer over the Transaction Link or Management Link, as applicable | | |
| H3 | 1 | 46 | H3.1.46 | Network | SSL | Hosting Provider shall deploy SSL for all Web-based applications for Hosting Provider deployments that involve Internet-facing deployments and for deployments that are accessible through a secure network, such as a hardware VPN. SSL must be used for data transmitted through all Hosting Provider Web-based applications. | | |

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| H3 | 1 | 47 | H3.1.47 | Network | SSL | Hosting provider shall deploy non SSL-enabled applications privately and not expose them ot the public Internet. Such application shall be accessible through a secure network connection. Customer connections to non-Internet applications must use SSL and a secure network connection. | | |
| H3 | 1 | 48 | H3.1.48 | Network | SSL | Although Customer may choose to access its Web-based, SSL-enabled applications through the public Internet, Hosting Provider will recommend that Customer deploy such applications as non-Internet facing using SSL and a secure network connection, such as a hardware VPN. | | |
| H3 | 1 | 49 | H3.1.49 | Network | SSL | The Hosting Provider shall procure and renew SSL certificates on Customer's behalf. | | |
| H3 | 1 | 50 | H3.1.50 | Network | SSL | --- | | |
| H3 | 1 | 51 | H3.1.51 | Network | WAN | --- | | |
| H3 | 1 | 52 | H3.1.52 | Network | WAN | Hosting Provider shall establish a dedicated circuit between the Hosting Provider Data Center(s) and the Customer Data Center which shall only used for Hosting Provider Services. | | |
| H3 | 1 | 53 | H3.1.53 | Network | WAN | --- | | |
| H3 | 1 | 54 | H3.1.54 | Network | WAN | --- | | |
| H3 | 1 | 55 | H3.1.55 | Network | WAN | --- | | |
| H3 | 1 | 56 | H3.1.56 | Network | WAN | --- | | |
| H3 | 1 | 57 | H3.1.57 | Network | WAN | --- | | |
| H3 | 1 | 58 | H3.1.58 | Network | WAN | --- | | |
| H3 | 1 | 59 | H3.1.59 | Network | WAN | --- | | |
| H3 | 1 | 60 | H3.1.60 | Network | WAN | --- | | |
| H3 | 1 | 61 | H3.1.61 | Network | WAN | --- | | |
| H3 | 1 | 62 | H3.1.62 | Network | WAN | --- | | |
| H3 | 1 | 63 | H3.1.63 | Network | WAN | --- | | |
| H3 | 1 | 64 | H3.1.64 | Network | WAN | --- | | |
| H3 | 1 | 65 | H3.1.65 | Network | WAN | --- | | |
| H3 | 1 | 66 | H3.1.66 | Network | WAN | --- | | |
| H3 | 1 | 67 | H3.1.67 | Network | General | Solutions will use TCP/IP as its networking protocol. | | |

## SOV Consolidated Non-Functional Requirements Traceability Matrix (RTM)

### Backup Recovery

| Base | Level | Sub | Req ID New | Focus | Specifics | Requirement Description | Notes | Evidence |
|---|---|---|---|---|---|---|---|---|
| H4 | 1 | 1 | H4.1.1 | Backup Recovery | General | Backup and Recovery Services, retention and performance will be compliant with HIPAA, IRS 1075, PCI-DSS standards. | | |
| H4 | 1 | 2 | H4.1.2 | Backup Recovery | General | Backup Recovery Services will be in place for Production Environment and Non-Production Environments where applicable. | | |
| H4 | 1 | 3 | H4.1.3 | Backup Recovery | General | Backup and Recovery Services will include operating system images, configuration files, database, code tree, hardware configurations and virtualization configurations. | | |
| H4 | 1 | 4 | H4.1.4 | Backup Recovery | General | In the event of a declaration Backup Recovery Services will be activated at the Disaster Recovery site. | | |
| H4 | 1 | 5 | H4.1.5 | Backup Recovery | General | Full backups of Customers's Environments shall be taken weekly with incremental backups taken daily with data stored offsite with a required retention period of 7 years or EOC with supplier. | | |
| H4 | 1 | 6 | H4.1.6 | Backup Recovery | General | Hosting Provider will perform and store production baseline backup of the database, application code tree, and archive logs, upon Customer's request. | | |
| H4 | 1 | 7 | H4.1.7 | Backup Recovery | Overall availability | Backup solutions shall support 99.9% application availability. | | |
| H4 | 1 | 8 | H4.1.8 | Backup Recovery | Recovery point objective | The recovery point objective (RPO) shall be 30 minutes | | |
| H4 | 1 | 9 | H4.1.9 | Backup Recovery | Recovery time objective | The recovery time objective (RTO) shall be four (4) hours | | |
| H4 | 1 | 10 | H4.1.10 | Retention | Database Log retention | Solutions shall keep log files on disk for 1 week, archive (compress, to tape ,etc) and keep for a month and purge the archives if older than a month. | | |
| H4 | 1 | 11 | H4.1.11 | Backup Recovery | Offsite backup storage | One copy of the backup should store at off-site location daily. | | |
| H4 | 1 | 12 | H4.1.12 | Backup Recovery | Availability during backup | Backups should be completed while the application is still active and supporting users. | | |
| H4 | 1 | 13 | H4.1.13 | Backup Recovery | Procedure definition and training | Procedures must be defined and adequate personnel trained to recover the system state from a consistent set of backup data. | | |
| H4 | 1 | 14 | H4.1.14 | Backup Recovery | Backup and recovery procedures | Backup/Recovery procedures should be successfully executed multiple times prior to the production launch of the system to validate the procedures and affirm ability to meet recovery requirements. | | |
| H4 | 1 | 15 | H4.1.15 | DR | DR testing | The DR facility will be tested annually for full recovery within a 4 hour recovery timeframe. | | |
| H4 | 1 | 16 | H4.1.16 | DR | DR topology | Disaster Recover facility and Environment will provide a mirror of Production Environment and can meet RPO and RTO requirements. | | |
| H4 | 1 | 17 | H4.1.17 | Backup Recovery | Contractor | The contractor shall store backed-up data apart from the production data center that are at least 60 miles or as agreed upon by the Contractor and the Exchange to prevent simultaneous loss of production and backup data stores. | Iron Mountain is 28.5 miles from the CGI Phoenix Data Center | |

## SOV Consolidated Non-Functional Requirements Traceability Matrix (RTM)

### Capacity and Performance Management

| Base | Level | Sub | Req ID New | Focus | Specifics | Requirement Description | Notes | Evidence |
|---|---|---|---|---|---|---|---|---|
| H5 | 1 | 1 | H5.1.1 | Capacity / Performance Management | | --- | | |
| H5 | 1 | 2 | H5.1.2 | Capacity / Performance Management | | Hosting Provider will perform Capacity Management which is provided for both reactive and proactive capacity assessments. Reactive capacity assessments are conducted in response to an Incident in which capacity issues may have been a contributing cause. Proactive capacity assessments are conducted as part of the Periodic Maintenance Plan for the Production Environment as a preventive measure in an attempt to avoid the occurrence of a capacity-related Incident. Reactive and proactive capacity assessments leverage performance and utilization data from the Production Environment, along with the current Architecture Document to determine if utilization is at or is trending toward a capacity limit. If a capacity limit is identified from the capacity assessment, Hosting Provider may recommend an increase to capacity. | | |
| H5 | 1 | 3 | H5.1.3 | Capacity / Performance Management | | Hosting Provider will collect performance and capacity metrics | | |
| H5 | 1 | 4 | H5.1.4 | Capacity / Performance Management | | Hosting Provider will conduct analysis of capacity-related metrics in reaction to monitoring alerts or Incidents that may indicate possible capacity issues | | |
| H5 | 1 | 5 | H5.1.5 | Capacity / Performance Management | | Hosting Provider will conduct Capacity Management periodically as part of the Periodic Maintenance Plan | | |
| H5 | 1 | 6 | H5.1.6 | Capacity / Performance Management | | Hosting Provider will periodically review storage requirements and alert Customer as capacity limits are approached | | |
| H5 | 1 | 7 | H5.1.7 | Capacity / Performance Management | | Hosting Provider will make recommendations to Customer of appropriate configuration and/or architecture Changes to address identified capacity issues | | |
| H5 | 1 | 8 | H5.1.8 | Capacity / Performance Management | | Hosting Provider will, when recommending Changes to Customer's architecture, create an updated architecture document that reflects such changes | | |
| H5 | 1 | 9 | H5.1.9 | Capacity / Performance Management | | Hosting Provider will implement Changes to address capacity issues following review with Customer in accordance with the Release Management process | | |
| H5 | 1 | 10 | H5.1.10 | Capacity / Performance Management | | Hosting Provider will modify workload to best utilize existing capacity if capacity issues are related to workload management (e.g., batch job scheduling, report execution, etc.) | | |
| H5 | 1 | 11 | H5.1.11 | Capacity / Performance Management | | Hosting Provider will establish workload management practices to distribute the batch workload across the daily, weekly, and monthly production schedules, including scheduling of batch jobs, execution of reports, and all other business activity that impacts system performance | | |
| H5 | 1 | 12 | H5.1.12 | Capacity / Performance Management | | Hosting Provider will ensure batch workload is distributed across all available and appropriate system resources | | |
| H5 | 1 | 13 | H5.1.13 | Capacity / Performance Management | Load Balancing | Hardware and Network should support load balancing technologies for high availability and maintenance | | |
| H5 | 1 | 14 | H5.1.14 | Capacity / Performance Management | Continuous scalability | Server workloads should scale on-demand without shutting down the application | | |
| H5 | 1 | 15 | H5.1.15 | Capacity / Performance Management | Storage scalability | Storage should be flexible enough to add additional capacity of disks with minimal service disruption | | |
| H5 | 1 | 16 | H5.1.16 | Capacity / Performance Management | Seasonable load scalability | Server capacity should support month end and year end processing capacity | | |
| H5 | 1 | 17 | H5.1.17 | Capacity / Performance Management | Peak Concurrent Internal Users | System should support 400 concurrent internal users at peak time (6:00am - 6:00pm EST). | | |
| H5 | 1 | 18 | H5.1.18 | Capacity / Performance Management | Off-peak Concurrent Internal Users | System should support 100 concurrent internal users during Off-Peak hours (6:00pm - 6:00am EST). | | |
| H5 | 1 | 19 | H5.1.19 | Capacity / Performance Management | Peak Concurrent External Users | System should support 400 concurrent external users at peak time (6:00am - 6:00pm EST). | | |
| H5 | 1 | 20 | H5.1.20 | Capacity / Performance Management | Off-peak Concurrent External Users | System should support 400 concurrent internal users during Off-Peak hours (6:00pm - 6:00am EST). | | |
| H5 | 1 | 21 | H5.1.21 | Capacity / Performance Management | Server CPU utilization | The server(s) CPU utilization is not to exceed 85% | | |
| H5 | 1 | 22 | H5.1.22 | Capacity / Performance Management | Server memory utilization | The server(s) memory utilization is not to exceed 90% | | |
| H5 | 1 | 23 | H5.1.23 | Capacity / Performance Management | Server storage utilization | The server(s) disk space utilization is not to exceed 80% | | |
| H5 | 1 | 24 | H5.1.24 | Capacity / Performance Management | LAN collision rate | The Local Area Network (LAN) collision rate is not to exceed 20% | | |

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| H5 | 1 | 25 | H5.1.25 | Capacity / Performance Management | WAN utilization | The Wide Area Network (WAN) utilization is not to exceed 80% | | |
| H5 | 1 | 26 | H5.1.26 | Capacity / Performance Management | Storage growth | Storage systems shall have the capability if necessary to expand up to 20% in size per year | | |
| H5 | 1 | 27 | H5.1.27 | Capacity / Performance Management | Server network speed | Inter-server communication should be on a Gigabit-class network with appropriate switch support | | |
| H5 | 1 | 28 | H5.1.28 | Capacity / Performance Management | Switch standard clustered databases | Clustering of database servers and application should connect thru private network. | | |
| H5 | 1 | 29 | H5.1.29 | Capacity / Performance Management | Application Requirement | Solutions shall be designed for ease of maintenance and readily allow future functional enhancements. | | |
| H5 | 1 | 30 | H5.1.30 | Capacity / Performance Management | Application Requirement | Solutions shall be adequately flexible to keep up with ever changing technology and regulatory changes. | | |
| H5 | 1 | 31 | H5.1.31 | Capacity / Performance Management | Application Requirement | Solutions shall be scalable and adaptable to meet future growth and expansion needs such that Solutions can be expanded and be able to retain its performance levels when adding additional users, functions, and data. | | |
| H5 | 1 | 32 | H5.1.32 | Capacity / Performance Management | Application Requirement | The screens shall be highly re-configurable, providing ability to reposition and rename field labels, remove or turn-off unused fields, maintain data, and allow addition of custom-defined fields. | | |
| H5 | 1 | 33 | H5.1.33 | Capacity / Performance Management | Application Requirement | State shall be able to modify the labels and arrangement of information in the data model Solution documentation templates and can create custom data fields. | | |
| H5 | 1 | 34 | H5.1.34 | Capacity / Performance Management | Application Requirement | Solutions shall provide the ability to create and/or modify edits and business rules which determine the correctness/integrity of data. | | |
| H5 | 1 | 35 | H5.1.35 | Capacity / Performance Management | General | Solutions shall provide the ability for on-line access by any site connected to the organization Wide Area Network (WAN). | | |
| H5 | 1 | 36 | H5.1.36 | Capacity / Performance Management | Application Requirement | Solutions shall provide the capability for remote access in compliance with existing State connectivity/security policies | | |
| H5 | 1 | 37 | H5.1.37 | Capacity / Performance Management | Application Requirement | Solutions response time during peak agency level operations shall be 3 seconds or less for 95 percent of the search and lookup queries (does not include adhoc queries and analytics). Maximum response time shall not exceed 15 seconds except for agreed to exclusions. Response time is defined as the time elapsed after depressing an ENTER key (or clicking on a button that submits the screen for processing) until a response is received back on the same screen. | | |
| H5 | 1 | 38 | H5.1.38 | Capacity / Performance Management | Application Requirement | Solutions shall be built such that expansion of the system can be achieved with a minimum of additional system administration burden and staffing. | | |
| H5 | 1 | 39 | H5.1.39 | Capacity / Performance Management | Application Requirement | Solutions administration staffing requirements and workload should be minimally impacted with expanded system usage. | | |
| H5 | 1 | 40 | H5.1.40 | Capacity / Performance Management | Application Requirement | Solutions shall be built so that there is a near linear relationship between each additional server added, and the additional load that can be accommodated (load vs. capacity added), up to specified limit. | | |
| H5 | 1 | 41 | H5.1.41 | Capacity / Performance Management | A4.17 | Solutions shall provide the ability to recover from data loss due to end user error and end application error. | | |
| H5 | 1 | 42 | H5.1.42 | Capacity / Performance Management | A4.18 | Solutions shall provide the ability to perform archival/incremental backups and the ability to perform open/closed database backups. | | |
| H5 | 1 | 43 | H5.1.43 | Capacity / Performance Management | A4.19 | Solutions shall provide tools included for managing an environment that supports both high availability and disaster recovery. | | |
| H5 | 1 | 44 | H5.1.44 | Capacity / Performance Management | A4.2 | Solutions shall return a Dashboard report within 5 seconds or less from all user locations with a high speed network connection (greater than 768KB), 95% of the time. (for average webpage response) | | |
| H5 | 1 | 45 | H5.1.45 | Capacity / Performance Management | A4.23 | Solutions shall include the capability to maintain all data according to state defined records retention guidelines (i.e. record schedule). General schedules can be found at: http://vermont-archives.org/records/schedules/general/. Specific retention disposition orders can be found at: http://Customer-archives.org/records/schedules/orders/.<br><br>In general document retentions range from 3 to 10 years. In addition to the above note that case records including Child Support-related data must be retained for a minimum of 3 years after Case closure and the youngest child in the case is 18 years old. | | |
| H5 | 1 | 46 | H5.1.46 | Capacity / Performance Management | A4.25 | Solutions shall provide on-line access of up to 6 months of data to be used for processing eligibility. | | |
| H5 | 1 | 47 | H5.1.47 | Capacity / Performance Management | A4.4 | Solutions shall return a parameter-based report within 20 seconds or less.(on average) | | |
| H5 | 1 | 48 | H5.1.48 | Capacity / Performance Management | A4.5 | Solutions will give the highest priority to Search and Look up operations performance, conforming to the minimum acceptable performance standard of 5 seconds response time, for 95% of queries. (on average) | | |

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|---|---|---|---|---|---|---|---|---|
| H5 | 1 | 49 | H5.1.49 | Capacity / Performance Management | A4.6 | Solutions shall be available for use 99.9% of the time (no more than 8.8 hours of downtime per year). | | |
| H5 | 1 | 50 | H5.1.50 | Capacity / Performance Management | A4.7 | Solutions shall be architected with no single point of failure, supporting a high-availability enterprise | | |
| H5 | 1 | 51 | H5.1.51 | Capacity / Performance Management | A4.8 | Hours of operations shall be 24 hours per day, 7 days per week, and 365 days a year. | | |
| H5 | 1 | 52 | H5.1.52 | Capacity / Performance Management | A4.9 | Solutions shall have the ability to support session replication and transparent failover using high-availability processor architectural options. | | |
| H5 | 1 | 53 | H5.1.53 | Capacity / Performance Management | Failure Detection, Notification, and Restart | All components must be provided with a framework for automatic failure detection, notification, and restart. | | |
| H5 | 1 | 54 | H5.1.54 | Capacity / Performance Management | Remote Diagnostics | All servers must be capable of remote diagnosis,configuration, personalization, and other types of administration. | | |
| H5 | 1 | 55 | H5.1.55 | Capacity / Performance Management | Event Creation and Notification | The architecture must provide standardized services for general event creation and notification. | | |
| H5 | 1 | 56 | H5.1.56 | Capacity / Performance Management | First Failure Data Capture | First failure data capture means that sufficient error and diagnostic information is captured to allow problem source identification without recreating the problem. | | |
| H5 | 1 | 57 | H5.1.57 | Capacity / Performance Management | First Failure Data Capture | The architecture must provide standardized services for first failure data capture in error handling. All components of the architecture and application code must implement the concept of first failure data capture. | | |
| H5 | 1 | 58 | H5.1.58 | Capacity / Performance Management | Monitoring | It is the responsibility of the enterprise management framework to provide monitoring and alarm services for the environment. | | |
| H5 | 1 | 59 | H5.1.59 | Capacity / Performance Management | Monitoring detail | Monitoring tools must provide sufficient detail to identify the source and nature of faults. | | |
| H5 | 1 | 60 | H5.1.60 | Capacity / Performance Management | Monitoring communication | The tools should also support alert communication via email and text messages and automated response capability (e.g. An error event causes a script to be executed to restart a service). | | |
| H5 | 1 | 61 | H5.1.61 | Capacity / Performance Management | Enterprise management interoperability | The architecture must work closely with the enterprise management framework to provide the appropriate events. | | |
| H5 | 1 | 62 | H5.1.62 | Capacity / Performance Management | Transaction tracability | The architecture must provide the capability to track and review transactions through the system for the purposes of auditing, error diagnosis, and performance management. At a minimum this traceability should be at the component interface level. Ideally this should be implemented in a fashion that allows dynamic starting and stopping of this service. | | |
| H5 | 1 | 63 | H5.1.63 | Capacity / Performance Management | Transaction visibility | Using a combination of instrumentation within code and monitoring tools. It is expected that the environment will be managed through an overall quality process that includes the analysis of performance and availability results. The architecture needs to support the extraction and analysis of this information. | | |
| H5 | 1 | 64 | H5.1.64 | Capacity / Performance Management | Modular component modifiability | Ensuring the ability to apply changes at the component and data level. The goal is to be able to make these changes with no loss of availability at the application or component level. | | |
| H5 | 1 | 65 | H5.1.65 | Capacity / Performance Management | Monitor performance and utilization | The architecture must provide the ability to record and monitor the performance and utilization of resources within the overall system and individual component types | | |
| H5 | 1 | 66 | H5.1.66 | Capacity / Performance Management | Technology component monitoring | Individual technology components (e.g., SOA, MDM, IdM) shall be monitored using an enterprise monitoring tool. | | |
| H5 | 1 | 67 | H5.1.67 | Capacity / Performance Management | Component level monitoring | The system must measure and record performance metrics at a system component level so that appropriate reports can be generated for monitoring purposes. | | |
| H5 | 1 | 68 | H5.1.68 | Capacity / Performance Management | UI Response Time | UI level transaction should complete in 5 seconds (on average) | | |
| H5 | 1 | 69 | H5.1.69 | Capacity / Performance Management | Query Response Time | Query thru UI layer should show results in 15 seconds (on average) | | |
| H5 | 1 | 70 | H5.1.70 | Capacity / Performance Management | Data Refresh | Datawarehouse and other non-OLTP data sources shall be refreshed within 24 hours | | |
| H5 | 1 | 71 | H5.1.71 | Capacity / Performance Management | non-functional | Hosting Provider shall develop, maintain, and enforce a Capacity Plan. | | |

## SOV Consolidated Non-Functional Requirements Traceability Matrix (RTM)

### Configuration Management

| Base | Level | Sub | Req ID New | Focus | Specifics | Requirement Description | Notes | Evidence |
|---|---|---|---|---|---|---|---|---|
| H6 | 1 | 1 | H6.1.1 | Configuration Management | | Hosting Provider shall implement and maintain Configuration Management documentation and processes. | | |
| H6 | 1 | 2 | H6.1.2 | Configuration Management | | Hosting Provider will maintain an Architecture Document to represent the current configuration of the Environment | | |
| H6 | 1 | 3 | H6.1.3 | Configuration Management | | Hosting Provider will account for all IT assets and configurations within the Environment | | |
| H6 | 1 | 4 | H6.1.4 | Configuration Management | | Hosting Provider will conduct audits as necessary to validate the physical existence of configuration components and accuracy of configuration management data | | |
| H6 | 1 | 5 | H6.1.5 | Configuration Management | | Hosting Provider will maintain accurate documentation on configurations to support other service management processes | | |
| H6 | 1 | 6 | H6.1.6 | Configuration Management | | Hosting Provider will maintain configuration records of changes to Third Party Software | | |
| H6 | 1 | 7 | H6.1.7 | Configuration Management | | Hosting Provider will assume responsibility for configuring, managing and tracking all equipment and software at Vermont's locations that is considered part of Hosting Providers Programs. | | |
| H6 | 1 | 8 | H6.1.8 | Configuration Management | | --- | | |
| H6 | 1 | 9 | H6.1.9 | Configuration Management | | Supplier shall develop a technical infrastructure document which describes all of the hardware, system software and tools necessary for each proposed deployment environment. Due date is 9/1/13 unless changed to some other date mutually agreed upon. Hosting provider is responsible to communicate to the Customer in order to successfully complete. | | |
| H6 | 1 | 10 | H6.1.10 | Configuration Management | | Supplier shall develop an environment configuration manual that describes the environment installation and configuration necessary deployent environment. Due date is 9/1/13 unless changed to some other date mutually agreed upon. Hosting provider is responsible to communicate to the Customer in order to successfully complete. | | |
| H6 | 1 | 11 | H6.1.11 | Configuration Management | | --- | | |
| H6 | 1 | 12 | H6.1.12 | Configuration Management | | Supplier shall provide the State with readable source code and object (executable) code, documentation for all functionality developed by Supplier, licenses to readable source code and object (executable) code, and documentation for all COTS functionality and escrow of source code for the COTS. All new software functionality built on top of COTS software shall be owned by the State. Due date is 9/1/13 unless changed to some other date mutually agreed upon. Hosting provider is responsible to communicate to the Customer in order to successfully complete. | | |
| H6 | 1 | 13 | H6.1.13 | Configuration Management | | Supplier shall provide a data dictionary and data model for the State. | | |
| H6 | 1 | 14 | H6.1.14 | Configuration Management | | The Hosting Provider shall provide exit plan addressing portability of solution in case Customer wants to transition Environment to another Hosting Provider. (See Transition Requirements) | | |

## SOV Consolidated Non-Functional Requirements Traceability Matrix (RTM)

### Release Management

| Base | Level | Sub | Req ID New | Focus | Specifics | Requirement Description | Notes | Evidence |
|---|---|---|---|---|---|---|---|---|
| H7 | 1 | 1 | H7.1.1 | Release Management | | Hosting Provider shall have a standard Maintenance Windows for purposes of applying Infrastructure Releases. These Maintenance Windows differ from the time frame set between Hosting Provider and Customer for Customer-specific Release Management activities. | | |
| H7 | 1 | 2 | H7.1.2 | Release Management | | Hosting Provider will provide notification when it intends to use standard Maintenance Windows in lieu of another time frame scheduled for Customer-specfiic Release Management activities. | | |
| H7 | 1 | 3 | H7.1.3 | Release Management | | Hosting Provider will perform maintenance on Infrastructure as specified by the SLA | | |
| H7 | 1 | 4 | H7.1.4 | Release Management | | Hosting Provider will as deemed necessary by Hosting Provider, but no more than twice per year, perform maintenance on Customer's Infrastructure during a 12-hour window (the "Semiannual Maintenance Window") | | |
| H7 | 1 | 5 | H7.1.5 | Release Management | | Component changes may include but are not limited to hardware replacement, operating system patches and upgrades, and configuration changes. | | |
| H7 | 1 | 6 | H7.1.6 | Release Management | | Infrastructure Components may include but are not limited to Servers, network devices, and storage. | | |
| H7 | 1 | 7 | H7.1.7 | Release Management | | Hosting Provider will send email notifications, including an overview of the Release, within minimum 72 hours in advance of use of a Weekly Maintenance Window and 30 days in advance of use of a Semiannual Maintenance Window | | |
| H7 | 1 | 8 | H7.1.8 | Release Management | | Hosting Provider will use commercially reasonable efforts to coordinate the timing of Release-related maintenance activities | | |
| H7 | 1 | 9 | H7.1.9 | Release Management | | Hosting Provider will have approval for Changes to Infrastructure components requested by Hosting Provider that will be implemented outside the standard Maintenance Windows and will affect functionality | | |
| H7 | 1 | 10 | H7.1.10 | Release Management | | When functionality is ready to be delivered to the Customer for User Acceptance Testing (UAT), it shall be delivered in the form of a pre-production release. Since the Customer will approve all releases into production, a pre-production release is equivalent to a production release and requires the rigor associated with a production release. Upon successful completion of UAT, the Customer will schedule a release to be moved to the production environment. Each pre-production release shall include the following: - Release-specific hardware and software Solution components. - Release description including architecture or design updates, new functionality introduced, defects fixed, modifications to interfaces with other systems, other changes to existing code, and any software and hardware configuration changes. - Release contents including a description of the release structure and contents and instructions for assembling and/or configuring the components of the release. - Test Plan and test execution results. - Detailed hardware and software configuration information including any software and hardware dependencies and instructions at a level of detail that will enable administrators staff to rebuild and configure the hardware environment without outside assistance. - Database documentation conforming to industry standards. - Detailed configuration information for any 3rd party hardware and software. Supplier shall provide updated documentation when upgrades to software or equipment occurs through the life of the contract or project. | | |
| H7 | 1 | 11 | H7.1.11 | Release Management | | Upon successful completion of the pre-production testing, Supplier shall, in coordination with the Customer, create a Production Release Plan. The Project Release Plan shall consist of an updated Pre-Production Release notification (this is a notification/warning) to assist the Customer in successfully releasing and maintaining the Solution in the Production environment. It must include, but not be limited to, the following components: - Updated Configuration Information required satisfying the solutions' production configuration management requirements. - Updated Solution Architecture. - Updated Detailed Design, including detailed system, technical, and user documentation. - Deployment schedule | | |

## SOV Consolidated Non-Functional Requirements Traceability Matrix (RTM)

### Monitoring Management

| Base | Level | Sub | Req ID New | Focus | Specifics | Requirement Description | Notes | Evidence |
|---|---|---|---|---|---|---|---|---|
| H8 | 1 | 1 | H8.1.1 | Monitoring | | Hosting Provider will install Hosting Provider Tools on Servers within Vermont's Infrastructure that enable monitoring and management capabilities | | |
| H8 | 1 | 2 | H8.1.2 | Monitoring | | Hosting Provider will identify event threshold violations for proactive response | | |
| H8 | 1 | 3 | H8.1.3 | Monitoring | | Hosting Provider will facilitate configuration of monitoring events | | |
| H8 | 1 | 4 | H8.1.4 | Monitoring | | Hosting Provider will provide performance management historical data, such as operating system performance graphs upon request and where such data is available | | |
| H8 | 1 | 5 | H8.1.5 | Monitoring | | Hosting Provider will provide network performance monitoring, including WAN/LAN link utilization, latency and loss, and key LAN switch port performance monitoring | | |
| H8 | 1 | 6 | H8.1.6 | Monitoring | | Hosting Provider will report Outages and Service Interruptions when identified | | |
| H8 | 1 | 7 | H8.1.7 | Monitoring | | Hosting Provider will monitor the network on the Vermont side and the WAN link from Vermont to Hosting Provider | | |
| H8 | 1 | 8 | H8.1.8 | Monitoring | | As part of Monitoring Services, Hosting Provider will use information collected by the Tools to monitor use, performance and availability of the Hosting Provider Programs and Computer and Administration Services and to help resolve service requests. | | |
| H8 | 1 | 9 | H8.1.9 | Monitoring | | Hosting Provider will monitor the services by utilizing a variety of Tools at various layers in the Technology Stack of the Environment ("Monitoring Services"). The Hosting Provider monitoring Tools are designed to collect, compile, and provide information about the capacity, performance, availability, and configuration of the Hosting Provider Programs running in the Environment, and about the configurations and the operational state of hardware, operating systems, and Hosting Provider services system support. | | |
| H8 | 1 | 10 | H8.1.10 | Monitoring | transaction monitoring and logging | Solutions shall detect major errors related to one or more components including loss of network connectivity, a database server going off line, or the application suffers a out-of-memory situation | | |
| H8 | 1 | 11 | H8.1.11 | Monitoring | transaction monitoring and logging | Solutions shall allow for different roles for Users including Operators, Administrators, Managers etc | | |
| H8 | 1 | 12 | H8.1.12 | Monitoring | transaction monitoring and logging | Solutions shall allow for Report generation and analysis for application troubleshooting and'capacity planning. | | |
| H8 | 1 | 13 | H8.1.13 | Monitoring | transaction monitoring and logging | --- | | |
| H8 | 1 | 14 | H8.1.14 | Monitoring | transaction monitoring and logging | Solutions shall detect less than desirable application performance, such as degraded servlet, database or other back end resource response times. | | |
| H8 | 1 | 15 | H8.1.15 | Monitoring | transaction monitoring and logging | Solutions shall have safeguards designed to ensure that configuration variables affecting the application and the back end resources remain at some predetermined configuration settings. | | |
| H8 | 1 | 16 | H8.1.16 | Monitoring | transaction monitoring and logging | Solutions shall detect intrusion attempts by unauthorized system users. | | |
| H8 | 1 | 17 | H8.1.17 | Monitoring | transaction monitoring and logging | Solutions shall monitor critical performance parameters'such as response time, resource availability, CPU Utilization, etc. | | |
| H8 | 1 | 18 | H8.1.18 | Monitoring | transaction monitoring and logging | Solutions shall provide a holistic view of a wide range of application services and network services | | |
| H8 | 1 | 19 | H8.1.19 | Monitoring | transaction monitoring and logging | Solutions shall send alarms based on the monitored attributes. These can be'escalated through E-Mail / SMS etc. | | |
| H8 | 1 | 20 | H8.1.20 | Monitoring | | Solutions shall allow to perform admin activities through an intuitive user interface. Shall have the ability to create'custom dashboards'to empower the users. | | |
| H8 | 1 | 21 | H8.1.21 | | | Hosting Provider shall utilize a network-based monitoring approach to detect attacks on open firewalls ports. | | |
| H8 | 1 | 22 | H8.1.22 | | | Network intrusion events are analyzed using signature detection against a database of known attacks which is updated as soon as new releases become available. | | |

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| H8 | 1 | 23 | H8.1.23 | | | Network instrusion alerts are forwarded to Hosting Providers IT security and Service Desk immediately for review and response. | | |
| H8 | 1 | 24 | H8.1.24 | | | Hosting provider shall employ a separate extranet for hosting servers separating them from its internal corporate network. | | |

## SOV Consolidated Non-Functional Requirements Traceability Matrix (RTM)

### Service Continuity Management

| Base | Level | Sub | Req ID New | Requirement Description | Notes | Evidence |
|---|---|---|---|---|---|---|
| H9 | 1 | 1 | H9.1.1 | Hosting Provider will provide Service Continuity Management for the Production Environment following a declared Disaster. | | |
| H9 | 1 | 2 | H9.1.2 | Disaster declaration will occur no later than 24 hours of Customers Application service becoming unavailable and will be a shared decision between Customer and Hosting Provider. | | |
| H9 | 1 | 3 | H9.1.3 | Customer may install the data and files from the applicable backup delivered by Hosting Provider onto a system(s) provided by Customer either at its facility or at a third party facility that it designates. | | |
| H9 | 1 | 4 | H9.1.4 | Hosting Provider will conduct regular system backups of the Environment(s) following the frequency and retention outlined by Customer. | | |
| H9 | 1 | 5 | H9.1.5 | In the event of a Disaster, within seven days from the time when a Disaster is declared, deliver to Customer's address and contact person specified a backup containing the database, code tree and archive logs that resided on the Production Environment at the time that Hosting Provider created such backup. | | |
| H9 | 1 | 6 | H9.1.6 | Hosting Provider will use reasonable efforts to restore access to and use of the Production Environment (including the recovery of production data) located at Hosting Provider's Data Center following declaration of the Disaster. | | |
| H9 | 1 | 7 | H9.1.7 | If determined that deployment at a Customer-retained secondary site (DR) is required for restoration and use of the Production Environment, use reasonable efforts to provide Customer with information that Customer reasonably requires to select DR cutover. | | |
| H9 | 1 | 8 | H9.1.8 | Hosting Provider will ship to the Customer address and contact person specified a data export that consists of data from Customer's Production database upon request. | | |
| H9 | 1 | 9 | H9.1.9 | Solutions (Application Services) shall be restored in less than 4 hours (RTO), and only experience the loss of the 30 minutes (RPO) of transactions. | | |
| H9 | 1 | 10 | H9.1.10 | Solutions shall support a Production and hot (real time replication) DR design that would allow one site to seamlessly be offline and the other site would maintain service without interruption meeting RPO and RTO requirements. | | |
| H9 | 1 | 11 | H9.1.11 | Solutions shall include a disaster recovery plan and provide contingency plans to Customer for application services managed by Hosting Provider. | | |
| H9 | 1 | 12 | H9.1.12 | Production Environment shall have a Disaster Recovery plan which includes Business Continuity components for the Exchange M&O as provided by the supplier | | |
| H9 | 1 | 13 | H9.1.13 | Solutions will maintain and effectively implement plans for emergency response, backup operations and post disaster recovery | | |

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| H9 | 1 | 14 | H9.1.14 | Disaster recovery requirements relative to the physical solution components and planning for recovery from operational failures are the responsibility of Supplier . Supplier shall develop an Operational Recovery Plan that addresses the following: - Areas of the solution most susceptible to failure or disaster that would result in downtime. - Recommendations for solution recovery processes, or steps to take in the event of a downtime event. - Recommendations for the State on how to comprehensively and effectively mitigate the risk of a downtime event. - Recommendations for securing the solution components during a period of emergency operation. | | |

## SOV Consolidated Non-Functional Requirements Traceability Matrix (RTM)

### Refreshes and Lifecycle

| Base | Level | Sub | Req ID New | Focus | Specifics | Requirement Description | Notes | Evidence |
|---|---|---|---|---|---|---|---|---|
| H10 | 1 | 1 | H10.1.1 | Refreshes and Lifecycle | | Refresh Services shall be delivered by Hosting Provider and designed to be delivered 24 hours a day, 7 days a week, 365 days a year (excluding agreed to Maintenance Windows and Planned Outages). | | |
| H10 | 1 | 2 | H10.1.2 | Refreshes and Lifecycle | | For each Environment set (consisting of a single Production Environment, Production Support Environment and Non-Production Environment(s)), Hosting Provider will perform all required number of Refreshes. Refreshes can be ondemand or scheduled based on Environment (Training versus Development). Hosting Provider-initiated Refreshes, such as Refreshes required as part of a data fix or Customer's Periodic Maintenance Plan will be approved by Customer. | | |
| H10 | 1 | 3 | H10.1.3 | Refreshes and Lifecycle | | Refresh from Customer's existing Production Environment, Production Support Environment, and/or Non-Production Environment to a new environment, Hosting Provider will use as the new environment either (i) one of Customer's existing available Hosting Provider environments for which Hosting Provider is providing Computer and Administration Services or Administration Services, or (ii) a new Additional Non-Production Environment. | | |
| H10 | 1 | 4 | H10.1.4 | Refreshes and Lifecycle | | Hosting Provider shall be able to reload an image copy of database files and application files from a backup to the Environment from which the copy was made (a "Restore"). | | |
| H10 | 1 | 5 | H10.1.5 | Refreshes and Lifecycle | | A Source Environment shall be defined as the Production Environment, Production Support Environment or Non-Production Environment from which the data for the Refresh will be obtained. The Target Environment is the Production Support Environment or Non-Production Environment to which the data for the Refresh will be applied. | | |
| H10 | 1 | 6 | H10.1.6 | Refreshes and Lifecycle | | Database Refreshes shall consist of copying the database from the Source Environment to the Target Environment and making the required configuration Changes within the database of the Target Environment. | | |
| H10 | 1 | 7 | H10.1.7 | Refreshes and Lifecycle | | Partial Refreshes shall consist of copying of the database and/or part of the application code from the Source Environment to the Target Environment and making the required configuration Changes within the database and application of the Target Environment. | | |
| H10 | 1 | 8 | H10.1.8 | Refreshes and Lifecycle | | Full Refreshes shall consist of copying the database and full application code from the Source Environment to the Target Environment and making the required configuration changes within the database and application of the Target Environment. | | |
| H10 | 1 | 9 | H10.1.9 | Refreshes and Lifecycle | | Code Refreshes consist of copying full application code from the Source Environment to the Target Environment and making the required configuration Changes within the application tier of the Target Environment. | | |
| H10 | 1 | 10 | H10.1.10 | Refreshes and Lifecycle | | Configuration Migration shall consist of copying application metadata and artifacts from the Source Environment to the Target Environment and making the required configuration Changes within the Target Environment. | | |
| H10 | 1 | 11 | H10.1.11 | Refreshes and Lifecycle | | Hosting provider will develop with Customer a Refresh Schedule to perform the Refreshes identified. | | |
| H10 | 1 | 12 | H10.1.12 | Refreshes and Lifecycle | | Hosting provider will perform the Refreshes identified in the using a backup of the Source Environment. | | |
| H10 | 1 | 13 | H10.1.13 | Refreshes and Lifecycle | | Hosting provider will perform Refreshes in accordance with standard Hosting Provider procedures and guidelines. | | |
| H10 | 1 | 14 | H10.1.14 | Refreshes and Lifecycle | | Hosting provider will perform Refreshes based on a submitted and approved change request from Customer | | |
| H10 | 1 | 15 | H10.1.15 | Refreshes and Lifecycle | | No more than one Refresh per Production Environment may be executed at a single point in time or otherwise run simultaneously. | | |
| H10 | 1 | 16 | H10.1.16 | Refreshes and Lifecycle | | Hosting provider shall work with one contact at Customer for coordination of refreshes | | |
| H10 | 1 | 17 | H10.1.17 | Refreshes and Lifecycle | | Refreshes shall be provided more frequently during the implementation phase as compared to the Post Production Go-Live phase. | | |
| H7 | 1 | 18 | H7.1.18 | Release Manager | | Database Data exports can contain all data from Customer's Production database(s). | | |

## SOV Consolidated Non-Functional Requirements Traceability Matrix (RTM)

### Maintenance and Operations

| Base | Level | Sub | Req ID New | Focus | Specifics | Requirement Description | Notes | Evidence |
|---|---|---|---|---|---|---|---|---|
| H11 | 1 | 1 | H11.1.1 | Maintenance and Operations | Contractor | Hosting provider shall conduct testing on any changes,upgrades to hardware or patches applied to ensure backward compatibility of its solution and integration within Customer's Environments | | |
| H11 | 1 | 2 | H11.1.2 | Maintenance and Operations | Contractor | The contractor shall work with the Customer in advance of any release or changes to allow the Exchange team to adequately test, verify and train to support the smooth operation of the Customers Applications and its solutions | | |
| H11 | 1 | 3 | H11.1.3 | Maintenance and Operations | Contractor | Hosting provider shall provide access for appropriate and authorized Customer team members to the test and training environments to ensure correct implementation of changes before the changes are released to the production environment | | |
| H11 | 1 | 4 | H11.1.4 | Maintenance and Operations | Contractor | Hosting provider shall provide version control management capability. All changes to the solution shall be reported and approved by the state, be maintained in the Contractor's version control management solution, which shall be available to the Customer for review and audit as needed. | | |
| H11 | 1 | 5 | H11.1.5 | Maintenance and Operations | non-functional | Supplier shall describe the production support and transition approach and methodology used for solutions. | | |
| H11 | 1 | 6 | H11.1.6 | Maintenance and Operations | non-functional | Supplier shall establish an automated maintenance routine that shall at a minimum: - backup the user IDs and password data - identify expired IDs and related data | | |
| H11 | 1 | 7 | H11.1.7 | Maintenance and Operations | non-functional | Upon completion of any maintenance call, Supplier shall furnish a maintenance activity report to the State within 24 hours, which shall include, at minimum, the following: - Date and time notified. - Date and time of arrival. - If hardware, type and serial number(s) of machine(s). - If software, the module or component name of the affected software code. - Time spent for repair. - List of parts replaced and/or actions taken. - Description of malfunction or defect. | | |
| H11 | 1 | 8 | H11.1.8 | Maintenance and Operations | non-functional | Supplier shall produce the solution's Operation Manual, which will serve as an operator's instruction manual. It will include solution administration procedures and describe the scheduled operations of the production system. It will contain specific instructions on things an operator needs to do to manage the solution on a daily basis, descriptions of administrative tasks, instructions on how to run the job, and what to do in abnormal situations. | | |
| H11 | 1 | 9 | H11.1.9 | Maintenance and Operations | non-functional | The solution component documentation shall include at a minimum: - A Data Dictionary - Data Model(s) - Interface design specifications - Passwords & activation codes - A Developer's Manual outlining and detailing operating, maintenance, development, processes, standards, procedures, plus any other technical information required to fully support the application. - Operations cycles and procedures including batch or background process schedule, dependencies, sequencing, and timing. - Administrative Tasks including users administration, solution security administration, reference data maintenance, creation of report templates and maintenance of service provider data and contracts. - Other reference materials and presentations required to supplement the training and support activities. | | |
| H11 | 1 | 10 | H11.1.10 | Maintenance and Operations | non-functional | Supplier shall develop a High Availability & Disaster Recovery Plan for the entire solution based on the assumption that the solution's data will be recovered at an alternate data center as designated by the State. | | |
| H11 | 1 | 11 | H11.1.11 | Maintenance and Operations | non-functional | Supplier shall provide documentation that describes the procedures for Solution administrators to add, update or remove user IDs and passwords. | | |
| H11 | 1 | 12 | H11.1.12 | Maintenance and Operations | non-functional | Supplier shall submit a Help Desk Support Plan for use by the responsible entity help desk addressing: - Overview of support strategy assuming that the State will provide tier 1 and 2 help desk support - Help desk design - Help desk operations (processes and procedures) - Incident management procedures and processes including escalation - Problem management procedures and processes - Reporting | | |
| H11 | 1 | 13 | H11.1.13 | Maintenance and Operations | non-functional | Supplier shall provide the responsible entity with help desk scripts and decision trees for tier 1 and 2 help desk support. | | |
| H11 | 1 | 14 | H11.1.14 | Maintenance and Operations | non-functional | Supplier shall provide a Transition-Out Plan six months prior to production support contract expiration. The Plan must contain transition task descriptions, an organization chart, and job descriptions for all support staff. | | |
| H11 | 1 | 15 | H11.1.15 | Maintenance and Operations | non-functional | Supplier shall provide instructions and training for responsible agency support staff that may need to access and support the solution remotely. | | |

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| H11 | 1 | 16 | H11.1.16 | Maintenance and Operations | non-functional | Supplier shall incorporate the production support and transition approach into a comprehensive Production Support and Transition Plan complying with the solution architectural design, that will describe how Supplier intends to support the solution and transition that support over to the entity responsible for on-going production operations and support. | | |
| H11 | 1 | 17 | H11.1.17 | Maintenance and Operations | non-functional | Supplier shall agree to continue normal operations activities until completion of Transition-Out Plan activities. | | |
| H11 | 1 | 18 | H11.1.18 | Maintenance and Operations | non-functional | Supplier shall, at a minimum, provide routine solution upgrades and fixes to the solution components at no additional cost. In addition, Supplier shall provide at no additional charge, routine solution upgrades and fixes to application software and field/technical services bulletins periodically as they become available within 24 hours after they receive them from application licensors, subcontractors, manufacturers, and other third parties. | | |
| H11 | 1 | 19 | H11.1.19 | Maintenance and Operations | non-functional | Supplier shall provide the State with a list of personnel, contact information, and their area of expertise of who shall be performing solution production support. | | |
| H11 | 1 | 20 | H11.1.20 | Maintenance and Operations | non-functional | Supplier shall repair any corrupted data that is associated with a problem in the solution. | | |
| H11 | 1 | 21 | H11.1.21 | Maintenance and Operations | non-functional | With concurrence from the State, the routine planned maintenance activities shall be scheduled without disrupting the negotiated operational hours. Hosting Provider shall provide the State with a copy of the schedule at least 30 days in advance of the scheduled maintenance date for approval. | | |
| H11 | 1 | 22 | H11.1.22 | Maintenance and Operations | non-functional | The testing tools and test configurations shall be provided to the State and responsible entities as the solution is transitioned into support. | | |
| H11 | 1 | 23 | H11.1.23 | Maintenance and Operations | non-functional | Supplier shall provide instructions and training for responsible entity support staff that may need to access and support the solution remotely (e.g. through PDAs, tablet PC's through a VPN). | | |
| H11 | 1 | 24 | H11.1.24 | Maintenance and Operations | non-functional | Supplier shall develop an automated process for purging production solution files when necessary. | | |
| H11 | 1 | 25 | H11.1.25 | Maintenance and Operations | non-functional | The Solution as defined in the Definition section shall be compatible with the State's Enterprise Management Components. The solution as defined in the Definition section shall protect and monitor at the network and application level. Application is defined in the Definition section. | | |
| H11 | 1 | 26 | H11.1.26 | Maintenance and Operations | non-functional | Application logs and error messages shall be monitored by the Hosting Provider. | | |
| H11 | 1 | 27 | H11.1.27 | Maintenance and Operations | non-functional | Web-based solutions shall permit analysis of web logs | | |
| H11 | 1 | 28 | H11.1.28 | Maintenance and Operations | non-functional | | | |
| H11 | 1 | 29 | H11.1.29 | Maintenance and Operations | non-functional | Solutions shall have critical security patches applied within 24 hours | | |
| H11 | 1 | 30 | H11.1.30 | Maintenance and Operations | non-functional | Solutions will ensure the system includes supported releases of all software, including any third part application components | | |
| H11 | 1 | 31 | H11.1.31 | Maintenance and Operations | non-functional | Solutions will include a supported release of all software. | | |
| H11 | 1 | 32 | H11.1.32 | Maintenance and Operations | non-functional | Solutions will support automated patch deployment. | | |
| H11 | 1 | 33 | H11.1.33 | Maintenance and Operations | Contractor | The hosting provider shall provide initial and ongoing maintenance and operations training for Customer staff. | | |
| H11 | 1 | 34 | H11.1.34 | Maintenance and Operations | non-functional | During the maintenance period, the maximum time to restore the functionality of applications and resolve incidents shall be within the timeframes listed in the Service Level Agreement. Incident Severity Level Definitions. ' Severity Level One incidents shall not exceed four (4) clock hours between the opening of an incident and final closure, unless a time extension is approved by the State. ' Severity Level Two incidents shall not exceed eight (8) business hours between the opening of an incident and final closure, unless a time extension is approved by the State. ' Severity Level Three incidents shall not exceed twenty four (24) business hours between the opening of an incident and final closure, unless a time extension is approved by the State. ' Severity Level Four incidents shall not exceed forty (40) business hours between the opening of an incident and final closure, unless a time extension is approved by the State. | | |

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| H11 | 1 | 35 | H11.1.35 | Maintenance and Operations | non-functional | The Hosting Provider and Customer will collaboratively integrate the M&O Plan into the Customer's M&O Plan. The Hosting Provider shall develop a formal methodology to be used by the Customer and its new hosting provider to manage and operate the Solution during M&O that is documented in the Customers M&O Plan(s). Hosting Provoder will deliver by 9/1/2013 unless another date is mutually agreed upon.<br><br>The M&O Plan shall incorporate methodologies and practices which will assist the Customer and its new hosting vendor in successfully managing the's M&O life cycle and shall address at least the following areas:<br>* Support Model<br>* Triage Procedures<br>* Tools<br>* Identification of Roles and Responsibilities of support personnel<br>* Release Management<br>* Upgrades<br>* Maintenance<br>* On-going Operations<br>* Customer Support<br>* Specific support procedures for production<br>* Deliverables<br>- Requirement Traceability Matrix, Architecture and design, test procedure, case, and scripts<br>* Resource Requirements (staff loading)<br>* Capacity Management<br>* Technology Refresh<br>* Solution Security<br>* Backup and Recovery<br>* Disaster Recovery<br>* Defect/Issue management". | | |
| H11 | 1 | 36 | H11.1.36 | Maintenance and Operations | non-functional | Solutions shall provide data archiving capabilities based on State defined criteria. | | |
| H11 | 1 | 37 | H11.1.37 | Maintenance and Operations | non-functional | All Solution communications shall be protected by at least 128-bit encryption. | | |
| H11 | 1 | 38 | H11.1.38 | Maintenance and Operations | non-functional | Solutions shall be supported by public key/private key encryption Secure Socket Layer (SSL) certificates. | | |
| H11 | 1 | 39 | H11.1.39 | Maintenance and Operations | non-functional | Solutions shall provide admin tools and maintenance routines to change access rights quickly. | | |
| H11 | 1 | 40 | H11.1.40 | Maintenance and Operations | non-functional | Solutions shall use firewalls and Demilitarized Zone (DMZ) for external access and remote access. | | |
| H11 | 1 | 41 | H11.1.41 | Maintenance and Operations | non-functional | Solutions shall allow Solution administrators to create and manage user accounts. | | |
| H11 | 1 | 42 | H11.1.42 | Maintenance and Operations | non-functional | Solutions shall allow Solution administrators to assign status and permissions to user accounts. | | |
| H11 | 1 | 43 | H11.1.43 | Maintenance and Operations | non-functional | Solutions shall allow Solution administrators to create and manage user roles. | | |
| H11 | 1 | 44 | H11.1.44 | Maintenance and Operations | non-functional | Solutions shall allow Solution administrators to create user groups to manage workflow. | | |
| H11 | 1 | 45 | H11.1.45 | Maintenance and Operations | non-functional | Solutions shall allow Solution administrators to assign users to particular local offices. | | |
| H11 | 1 | 46 | H11.1.46 | Maintenance and Operations | non-functional | Solutions shall allow Solution administrators to assign users to particular user groups / units. | | |
| H11 | 1 | 47 | H11.1.47 | Maintenance and Operations | non-functional | Solutions shall provide the capability to move all unnecessary data to offline storage according to a set of business rules and schedule to be defined by the State as a part of the ongoing system operational decision making. | | |

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| H11 | 1 | 48 | H11.1.48 | Maintenance and Operations | non-functional | Solutions shall allow Solution administrators to assign users to particular supervisors. | | |
| H11 | 1 | 49 | H11.1.49 | Maintenance and Operations | non-functional | Solutions shall maintain an archival process so that accumulated historical records and log files do not consume large amounts of disk space. | | |
| H11 | 1 | 50 | H11.1.50 | Maintenance and Operations | non-functional | Solutions shall provide an auto archive/purge of the log files to prevent uncontrolled growth of the log and historical records storage using administrator-set parameters. | | |
| H11 | 1 | 51 | H11.1.51 | Maintenance and Operations | non-functional | Solutions shall provide version control capabilities to ensure the integrity of all software releases. | | |
| H11 | 1 | 52 | H11.1.52 | Maintenance and Operations | non-functional | Solutions shall provide logging, reporting for accessing errors and exceptions. | | |
| H11 | 1 | 53 | H11.1.53 | Maintenance and Operations | non-functional | Solutions shall monitor and provide reports on any unauthorized access. | | |
| H11 | 1 | 54 | H11.1.54 | Maintenance and Operations | non-functional | Solutions shall track unusual or out of normal Solution operations usage or user access. | | |
| H11 | 1 | 55 | H11.1.55 | Maintenance and Operations | non-functional | Solutions shall have the ability to generate administrative alerts and warnings when statistics indicate an impact or potential limits on solution component performance and availability. The specific alerts will be defined by the hosting services provider. | | |
| H11 | 1 | 56 | H11.1.56 | Maintenance and Operations | non-functional | Solutions shall allow for all changes/updates to the distributed components to be administered and completed centrally and available immediately to all source systems and sites. | | |
| H11 | 1 | 57 | H11.1.57 | Maintenance and Operations | non-functional | Solutions shall provide event management and monitoring functionality according to Information Technology Infrastructure Library version 3 (ITIL v3) or equivalent best practices. | | |
| H11 | 1 | 58 | H11.1.58 | Maintenance and Operations | non-functional | Solutions shall provide Application Performance Monitoring and Management capabilities (i.e. transaction monitoring, synthetic transactions, component root cause analysis (e.g. Application Server Management) | | |
| H11 | 1 | 59 | H11.1.59 | Maintenance and Operations | non-functional | Solutions shall provide transaction tracking and log consolidation capabilities across all tiers of the application | | |
| H11 | 1 | 60 | H11.1.60 | Maintenance and Operations | non-functional | Supplier shall describe the implementation approach and methodology used for projects. | | |
| H11 | 1 | 61 | H11.1.61 | Maintenance and Operations | non-functional | Supplier shall develop a Software Configuration Management Plan. | | |
| H11 | 1 | 62 | H11.1.62 | Maintenance and Operations | non-functional | Supplier shall provide a software configuration management Solution to store, control, and track instances (baselines during the construction lifecycle) of all software configuration items developed for solutions. | | |
| H11 | 1 | 63 | H11.1.63 | Maintenance and Operations | non-functional | Supplier must use an industry standard software configuration management tool. | | |
| H11 | 1 | 64 | H11.1.64 | Maintenance and Operations | non-functional | | | |
| H11 | 1 | 65 | H11.1.65 | Maintenance and Operations | non-functional | Supplier shall incorporate the requirements management approach into a comprehensive Requirements Management Plan. The Requirements Management Plan will be used by the project to assure that requirements are met. The Requirements Management Plan shall, at a minimum, address the following areas: - Establishment of a baseline for existing requirements. - Management of versions of requirements. - Establish and maintain the State's requirements traceability matrix that will be used for requirements management, and will map where in the software a given requirement is implemented. - A requirements change control process. - A methodology for managing requirements in an iterative development lifecycle. - Procurement, installation, and administration of requirements management tools. - A description of the relationship between the requirements management role and the other roles (i.e. test management, quality assurance management) on the project. - Publishing of standard reports related to requirements management. | | |
| H11 | 1 | 66 | H11.1.66 | Maintenance and Operations | non-functional | Deployment is expected to be iterative from both a business process and applied technology perspective. The State will accept the products into the production environment through application of the acceptance criteria in testing plans. | | |
| H11 | 1 | 67 | H11.1.67 | Maintenance and Operations | non-functional | Supplier shall deliver to the State a requirements traceability matrix for all delivered functionality, showing all testing activities tracing to delivered functionality, and all delivered functionality tracing to requirements in the requirements repository. | | |
| H11 | 1 | 68 | H11.1.68 | Maintenance and Operations | non-functional | Supplier shall assist the State with testing and release preparation in the pre-production environment. | | |
| H11 | 1 | 69 | H11.1.69 | Maintenance and Operations | non-functional | Supplier must produce and execute an On-Site Implementation Support Plan. | | |

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| H11 | 1 | 70 | H11.1.70 | Maintenance and Operations | non-functional | Supplier shall incorporate the implementation approach into a comprehensive Implementation Plan. The State requires incremental deliveries of functionality to the production environment. The State anticipates considerable collaboration with Supplier in the plan's construction, with particular attention to high complexity components of the existing the State systems as well as the proposed solution. | | |
| H11 | 1 | 71 | H11.1.71 | Maintenance and Operations | non-functional | Supplier must provide staff at the proposed number, ratios and duration for on-site support (as identified in previously submitted implementation approach and plan). | | |
| H11 | 1 | 72 | H11.1.72 | Maintenance and Operations | non-functional | Supplier must assess the pre-implementation readiness of each part of the organization and shall document the status in a pre-implementation readiness assessment. Supplier shall conduct an implementation readiness review ten days prior to cutover at each part of the organization. | | |
| H11 | 1 | 73 | H11.1.73 | Maintenance and Operations | non-functional | --- | | |
| H11 | 1 | 74 | H11.1.74 | Maintenance and Operations | non-functional | --- | | |
| H11 | 1 | 75 | H11.1.75 | Maintenance and Operations | non-functional | --- | | |
| H11 | 1 | 76 | H11.1.76 | Maintenance and Operations | non-functional | Supplier shall produce a lessons learned document after conducting the Solution component pilots and provide recommendations for changes to the implementation process. | | |
| H11 | 1 | 77 | H11.1.77 | Maintenance and Operations | non-functional | The Implementation Plan must include information on technical challenges, deployment schedule phasing. The Implementation Plan shall: - Deliver solutions that include a significant portion of the technical infrastructure early in the schedule, without compromising the quality or inherent security of the solution. This should also validate the design and architecture. - Expose technically challenging areas of the project as soon as possible. - Deliver customized functionality to the State in incremental pieces that are in logical business application sequence. | | |
| H11 | 1 | 78 | H11.1.78 | Maintenance and Operations | non-functional | Supplier shall describe the interface management approach and methodology used for the solution. | | |
| H11 | 1 | 79 | H11.1.79 | Maintenance and Operations | non-functional | Supplier shall incorporate the interface management approach into a comprehensive Interface Management Plan. The Interface Management Plan will be used by the State to document the plan for integrating the solutions with all systems internal and external to the State. The Interface Management Plan shall, at a minimum, document the following areas: - The approach to developing and managing internal and external Solution interfaces. - Technical tools that will be used for data transformation, transport and error recovery. - Tasks, deliverables and resources necessary to complete interface development and implementation. - Description of how the solution development and test systems will work with the external interfaces. - References to applicable sections in the relevant design documents that describe how the solution will be synchronized with the specific internal and external interfaces. - References to applicable sections in the detailed design that describe the mappings between internal and external solution data. - Descriptions of the process for managing changes to the interfaces, both in the production and non-production environments - Interface(s) needed for maintaining data synchronization between an interim production Solution and the final production implementation. - Solution interfaces, data format, frequency of updates and expected data volume. - Process for interfacing and collaborating with interface partners, including roles, responsibilities, deliverables and timelines. - How the State development and test systems shall work with the external non-production interfaces. - Interface tools | | |
| H11 | 1 | 80 | H11.1.80 | Maintenance and Operations | non-functional | Supplier shall validate that each interface is working correctly. Supplier will repair all interface-related problems caused by Hosting Provider-developed interfaces. | | |
| H11 | 1 | 81 | H11.1.81 | Maintenance and Operations | non-functional | Supplier shall assist the State in identifying root causes for all solutions' interface related problems. | | |
| H11 | 1 | 82 | H11.1.82 | Maintenance and Operations | non-functional | Solutions will leverage permitted hosting environments to support their respective technology needs | | |
| H11 | 1 | 83 | H11.1.83 | Maintenance and Operations | non-functional | Solutions will use automated deployment tools and techniques to build, manage and synchronize different environments | | |
| H11 | 1 | 84 | H11.1.84 | Maintenance and Operations | non-functional | Solutions will ensure that environments are synchronized to ensure adequate pre-production testing | | |
| H11 | 1 | 85 | H11.1.85 | Maintenance and Operations | non-functional | Solutions will use an integrated date advancement and rollback feature in training and testing environments | | |
| H11 | 1 | 86 | H11.1.86 | Maintenance and Operations | Contractor | the hosting provider shall provide planned outage notification within the limits defined by the Exchange. | | |

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| H11 | 1 | 87 | H11.1.87 | Maintenance and Operations | non-functional | Application and technology components must allow for user analytics to be captured and reported | | |
| H11 | 1 | 88 | H11.1.88 | Maintenance and Operations | non-functional | Application and technology components shall support session replication to support transparent fail over. | | |
| H11 | 1 | 89 | H11.1.89 | Maintenance and Operations | non-functional | Application and technology components should be implemented using the Oracle stack (a.k.a. Oracle Fusion Middleware) and related components | | |
| H11 | 1 | 90 | H11.1.90 | Maintenance and Operations | non-functional | Solutions requiring a JEE server should utilize Oracle WebLogic Server | | |
| H11 | 1 | 91 | H11.1.91 | Maintenance and Operations | non-functional | Application Server shall enable deployment of mission-critical applications or components in a robust, secure, highly available, and scalable environment | | |
| H11 | 1 | 92 | H11.1.92 | Maintenance and Operations | non-functional | Application Server clusters shall provide scalability and reliability for applications by distributing the work load among multiple instances of the Server | | |
| H11 | 1 | 93 | H11.1.93 | Maintenance and Operations | non-functional | Application server shall provide overload protection to allow the Server the ability to detect, avoid, and recover from overload conditions. | | |
| H11 | 1 | 94 | H11.1.94 | Maintenance and Operations | non-functional | Application server shall prioritize work based on pre-defined rules and by monitoring actual run time performance statistics | | |
| H11 | 1 | 95 | H11.1.95 | Maintenance and Operations | non-functional | Application server shall support store-and-forward services to enable the Server to deliver messages reliably between applications that are distributed across many Server instances | | |
| H11 | 1 | 96 | H11.1.96 | Maintenance and Operations | non-functional | Application server shall allow System Administration that include tasks such as creating Application Server domains; deploying applications or components; migrating domains from development environments to production environments; monitoring and configuring the performance of the application Server domain; and diagnosing and troubleshooting problems | | |
| H11 | 1 | 97 | H11.1.97 | Maintenance and Operations | non-functional | The Application Server security architecture shall provide a comprehensive, flexible security infrastructure designed to address the security challenges of making applications or components available on the Web | | |
| H11 | 1 | 98 | H11.1.98 | Maintenance and Operations | non-functional | The application server shall provide for a monitoring and diagnostic service that creates, collects, analyzes, archives, and accesses diagnostic data generated by a running server and its deployed applications | | |
| H11 | 1 | 99 | H11.1.99 | Maintenance and Operations | Solution | The solution shall provide the ability to support commonly used Internet browsers with backwards compatability as defined by the Exchange. | | |
| H11 | 1 | 100 | H11.1.100 | Maintenance and Operations | Solution | The solution shall utilize a service management framework such as ITIL v3 or equivalent framework to manage IT services and infrastructure. | | |
| H11 | 1 | 101 | H11.1.101 | Maintenance and Operations | Solution | The solution must include hosting services for the development, testing/verification, training, certification and production environments that will be used to develop, maintain, and operate the solution. | | |
| H11 | 1 | 102 | H11.1.102 | Maintenance and Operations | Solution | The solution shall provide a standardized mechanism for Conflict Management and data integrity. | | |
| H11 | 1 | 103 | H11.1.103 | Maintenance and Operations | Solution | The contractor shall completely test and apply patches for all third-party software products before release. | | |
| H11 | 1 | 104 | H11.1.104 | Maintenance and Operations | Solution | The Contractor shall notify the Customer prior to the application of any testing or application of modifications to third-party software products | | |
| H11 | 1 | 105 | H11.1.105 | Maintenance and Operations | Solution | The contractor shall ensure that non-critical system management, virtualization, and administrative operational and system administration controls are isolated on the network layer that would contain protected health information (PHI) to prevent unnecessary administrative access to PHI. | | |
| H11 | 1 | 106 | H11.1.106 | Maintenance and Operations | Solution | The system shall utilize industry standard security protocols for transmitting data over networks (e.g. SSL, TLS, etc.) | | |
| H11 | 1 | 107 | H11.1.107 | Maintenance and Operations | Solution | The contractor shall implement network protection capabilities to detect and eliminate malicious software and/or unauthorized external connection attempts on network monitoring devices, servers, peripheral devices, and desktop workstations. | | |
| H11 | 1 | 108 | H11.1.108 | Maintenance and Operations | Contractor | The contractor shall provide all hosting services at data center(s), including back-up and recovery, at sites located within the United States. | | |
| H11 | 1 | 109 | H11.1.109 | Maintenance and Operations | Contractor | The contractor shall ensure that all data center operations and technical staff shall be located within the continental (CONUS) United States. | | |
| H11 | 1 | 110 | H11.1.110 | Maintenance and Operations | Contractor | The contractor is required to host, maintain, and operate the solution in production for the contract term. | | |
| H11 | 1 | 111 | H11.1.111 | Maintenance and Operations | Contractor | The contractor will be responsible for providing, installing, and maintaining all hardware, software, network components, and other infrastructure elements for the solution. | | |

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| H11 | 1 | 112 | H11.1.112 | Maintenance and Operations | Contractor | The contractor shall maintain reliable business operations in accordance with the agreed upon SLA. | | |
| H11 | 1 | 113 | H11.1.113 | Maintenance and Operations | Contractor | The Contractor shall provide a system with response times and transaction volume as defined by agreed upon SLA. | | |

## SOV Consolidated Non-Functional Requirements Traceability Matrix (RTM)

### Hosting Governance

| Base | Level | Sub | Req ID New | Focus | Specifics | Requirement Description | Notes | Evidence |
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| H12 | 1 | 1 | H12.1.1 | Hosting Governance | Governance | Hosting Provider will establish Governance Services that are designed to provide a formal management framework and structure that enables Hosting Provider and Customer to manage their relationship, expectations, and dependencies with respect to the Hosting Services. | | |
| H12 | 1 | 2 | H12.1.2 | Hosting Governance | Governance | Governance Services will consist of account management, service management, and project management. The success of the governance relationship is dependent upon the effective ongoing engagement of both Hosting Provider and Customer. The Governance framework is supported by a documented set of standards and processes as described in this Schedule. | | |
| H12 | 1 | 3 | H12.1.3 | Hosting Governance | Governance | Hosting Provider will manage the Customer relationship through a series of planning, execution, and review activities. These activities support service level management, availability management, and capacity management under the Hosting Provider Services. | | |
| H12 | 1 | 4 | H12.1.4 | Hosting Governance | Governance | Hosting Provider and Customer will determine the level of Governance Services that is required to support the Environment based on the complexity of Customer's business requirements and/or the types of Hosting Provider Services purchased by Customer. | | |
| H12 | 1 | 5 | H12.1.5 | Hosting Governance | Governance | The services performed by Hosting Provider shall include project planning, development, transition, migration, implementation, configuration services, or any customization or Upgrades of the Hosting Provider Programs. Hosting Provider is responsible for supporting or performing services for any customizations or CEMLIs in the Environment or for managing Service Requests related to functional issues. | | |
| H12 | 1 | 6 | H12.1.6 | Hosting Governance | Governance | Hosting Provider will provide Governance Services that are delivered and managed via the agreed upon delivery methodologies (e.g., remote or onsite) and frequency through Customer agreement. | | |
| H12 | 1 | 7 | H12.1.7 | Hosting Governance | Account Logistics Management | Hosting Provider and Customer will work together to coordinate executive meetings between Hosting Provider and Customer. | | |
| H12 | 1 | 8 | H12.1.8 | Hosting Governance | Account Plan Management | --- | | |
| H12 | 1 | 9 | H12.1.9 | Hosting Governance | Account Plan Management | --- | | |
| H12 | 1 | 10 | H12.1.10 | Hosting Governance | Account Plan Management | Hosting provider shall work with Customer's change control board to plan and schedule strategic business and technology events that affect delivery of the service. | | |
| H12 | 1 | 11 | H12.1.11 | Hosting Governance | Account Plan Management | Hosting Provider will aid Customer in creating and chartering a change control board that consists of personnel from its business and IT departments who are authorized to make decisions on behalf of their respective departments. The change control board will make decisions on behalf of Customer as needed with respect to the Hosting Provider Services. | | |
| H12 | 1 | 12 | H12.1.12 | Hosting Governance | Account Plan Management | Ensure that Customer's change control board works and cooperates with Hosting Provider to plan and schedule strategic business and technology events that affect delivery of the Hosting Provider Services. | | |
| H12 | 1 | 13 | H12.1.13 | Hosting Governance | Account Plan Management | Hosting Provider will interact as a member of Customer's change control board meetings. | | |
| H12 | 1 | 14 | H12.1.14 | Hosting Governance | Account Reporting Management | Provide Account Reviews detailing services delivered and identifying potential additional services that may facilitate the Hosting Provider Services. | | |
| H12 | 1 | 15 | H12.1.15 | Hosting Governance | Availability Management | Hosting Provider will coordinate tactical business and technology events with Customer for the purpose of minimizing the impact to the availability of Customer's Production Environment. | | |
| H12 | 1 | 16 | H12.1.16 | Hosting Governance | Availability Management | Hosting Provider will provide an Availablity Plan to Customer detailing Production Environment availability. It deliverable by 9/1/2013 or at a mutually agreed upon time. | | |
| H12 | 1 | 17 | H12.1.17 | Hosting Governance | Availability Management | Hosting Provider will track and monitor Planned Outages and Unplanned Outages in an effort to meet availability targets identified in the availability plan. | | |
| H12 | 1 | 18 | H12.1.18 | Hosting Governance | Availability Management | Hosting Provider will provide the status of Root Cause Analysis for Severity Level 1 Unplanned Outages. | | |
| H12 | 1 | 19 | H12.1.19 | Hosting Governance | Availability Management | Hosting Provider will establish a suitable governance structure to support on-going projects and the operation of Customer's Production Environment. | | |
| H12 | 1 | 20 | H12.1.20 | Hosting Governance | Capacity Management | Hosting Provider will work with Customer to identify additional software and/or Infrastructure that may be required based on changes to Customer's business requirements. | | |
| H12 | 1 | 21 | H12.1.21 | Hosting Governance | Capacity Management | Hosting Provider will work with Customer to integrate required changes into the Production Environment. | | |
| H12 | 1 | 22 | H12.1.22 | Hosting Governance | Capacity Management | Hosting Provider will provide capacity information when Customer requests changes to the Production Environment. Examples of the types of requested changes are adding users or storage capacity. | | |
| H12 | 1 | 23 | H12.1.23 | Hosting Governance | Capacity Management | Hosting Provider will provide and maintain the Infrastructure requirements, including capacity and usage volumetric information as applicable. | | |
| H12 | 1 | 24 | H12.1.24 | Hosting Governance | Contract Ammendment | Hosting Provider will identify events and/or scenarios that may require that Customer purchase additional Hosting Provider licenses, services and/or Infrastructure. | | |
| H12 | 1 | 25 | H12.1.25 | Hosting Governance | Project Management | Hosting Provider will schedule Hosting Provider-initiated changes to Infrastructure, such as changes to hardware or network, to minimize impact on key business events identified by Customer. | | |
| H12 | 1 | 26 | H12.1.26 | Hosting Governance | Project Management | Hosting Provider will prepare, manage and report status, as appropriate, on project plans for Infrastructure events initiated by Hosting Provider. | | |
| H12 | 1 | 27 | H12.1.27 | Hosting Governance | Project Management | Hosting Provider will perform Hosting Provider-assigned activities and tasks for Infrastructure events initiated by Hosting Provider and/or Customer. | | |
| H12 | 1 | 28 | H12.1.28 | Hosting Governance | Service Escalation Management | Hosting Provider will assist Customer with escalating a Hosting Provider Service Request as needed. | | |

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| H12 | 1 | 29 | H12.1.29 | Hosting Governance | Service Escalation Management | Hosting Provider will track and monitor any formally escalated Hosting Provider Service Requests and RFCs through to resolution. | | |
| H12 | 1 | 30 | H12.1.30 | Hosting Governance | Service Escalation Management | Hosting Provider will manage escalated Service Requests and RFCs arising from or related to Hosting Provider-initiated Infrastructure events. | | |
| H12 | 1 | 31 | H12.1.31 | Hosting Governance | Service Management | Hosting Provider will Produce and articulate a Service Management Plan | | |
| H12 | 1 | 32 | H12.1.32 | Hosting Governance | Service Management | Hosting Provider will work with Customer to plan and schedule tactical business and technology events, such as software patching, maintenance, or Minor Releases. | | |
| H12 | 1 | 33 | H12.1.33 | Hosting Governance | Service Management | Hosting Provider will provide Service Plans to Customer detailing the schedule of tactical events. | | |
| H12 | 1 | 34 | H12.1.34 | Hosting Governance | Service Management | Hosting Provider will communicate process information regarding Change Management, Release Management, and other delivery processes that affect Customer. | | |
| H12 | 1 | 35 | H12.1.35 | Hosting Governance | Service Management | Hosting Provider will track and monitor execution of scheduled events. | | |
| H12 | 1 | 36 | H12.1.36 | Hosting Governance | Service Management | Hosting Provider will track dates for Customer's key planned business and technology events. Hosting Provider will aid Customer in giving appropriate advance notice as required to accommodate lead times in accordance with Hosting Provider Release Management processes. | | |
| H12 | 1 | 37 | H12.1.37 | Hosting Governance | Service Management | Hosting Provider will coordinate Customer's internal Change Management and Release Management processes with Hosting Provider processes. | | |
| H12 | 1 | 38 | H12.1.38 | Hosting Governance | Service Management | Hosting Provider will monitor and measure the operational performance of the Hosting Provider Services. | | |
| H12 | 1 | 39 | H12.1.39 | Hosting Governance | Service Management | Hosting Provider will identify, prepare and facilitate completion of corrective action plans designed to address the operational performance of the Hosting Provider Services. | | |
| H12 | 1 | 40 | H12.1.40 | Hosting Governance | Service Reporting Management | Hosting Provider will provide Customer with service reports, detailing the delivery of the Hosting Provider Services. | | |
| H12 | 1 | 41 | H12.1.41 | Hosting Governance | Service Reporting Management | Hosting Provider will coordinate Service Reviews, per the Governance Services to review the service reports with Customer. | | |
| H12 | 1 | 42 | H12.1.42 | Hosting Governance | Service Request and Request for Change Management | Hosting Provider will provide a process so Customer may request a Change to the Hosting Provider Services via the Change Management process (a "Request for Change" or a "RFC"). | | |
| H12 | 1 | 43 | H12.1.43 | Hosting Governance | Service Request and Request for Change Management | Hosting Provider will monitor and assist Customer with progressing Service Requests and RFCs that Hosting Provider and Customer have mutually agreed to monitor. | | |
| H12 | 1 | 44 | H12.1.44 | Hosting Governance | Service Request and Request for Change Management | Hosting Provider will upon Customer's request and subject to the Governance Services, provide Hosting Provider Service Request Reviews, detailing the status and progress of Customer-initiated Service Requests. | | |

## SOV Consolidated Non-Functional Requirements Traceability Matrix (RTM)

### Service Level Agreement SLA

| Base | Level | Sub | Req ID New | Focus | Specifics | Requirement Description | Notes | Evidence |
|---|---|---|---|---|---|---|---|---|
| H13 | 1 | 1 | H13.1.1 | Hosting SLA Definition | Hosting, SLA | Hosting Providers shall create and maintain Service Level Agreements (SLA) that describes the processes and obligations with respect to the availability of, and resolution of Incidents for, the programs for which Computer and Administration Services are provided, including specific service levels for performance and availability. | | |
| H13 | 1 | 2 | H13.1.2 | | Hosting, SLA, | In the event that multiple Service Levels have been missed and are determined to share the same root cause, Customer is entitled solely to the highest applicable Service Level Credit, rather than accumulated Service Level Credits across all missed Service Levels. | | |
| H13 | 1 | 3 | H13.1.3 | Non-production Availability SLA | Hosting, SLA, Application Availability (Non-Production) | The availability required for non-production applications shall be 99.5% | | |
| H13 | 1 | 4 | H13.1.4 | Production Availability SLA | Hosting, SLA, Application Availability (Production/DR) | The availability required for production applications shall be 99.9% | | |
| H13 | 1 | 5 | H13.1.5 | | Hosting, SLA, Application Availability Service Level (Production) | The Application Availability Service Level consists of the measurement of the percentage of time that the Production Environments are available for access and use by Customer to conduct business operations. | | |
| H13 | 1 | 6 | H13.1.6 | | Hosting, SLA, Basis for Calculation of Service Level Credits | If Hosting Provider's performance of the Computer and Administration Services in a given month does not meet an applicable Service Level, Customer may be eligible to receive a Service Level Credit. Service Level Credits shall be calculated clearly in the SLA. | | |
| H13 | 1 | 7 | H13.1.7 | Credit Criteria | Hosting, SLA, Credit Criteria | If the monthly performance measured for each Service Level is below the Service Level Target, then the credit criteria are used to determine the applicable Service Level Credit | | |
| H13 | 1 | 8 | H13.1.8 | | Hosting, SLA, Determining Service Request Severity Level (Adherence to Severity Level Definitions) | Hosting Provider and Customer shall establish a docuemnted a process to assure that the assignment and adjustment of any Severity Level designation is accurate based on the current impact of the reported Incident on Customer's use of the Hosting Provider Programs for business operations. | | |
| H13 | 1 | 9 | H13.1.9 | Service Request Severity Level Modification | Hosting, SLA, Determining Service Request Severity Level (Down Grade of Severity Level) | During the Service Request process, the Incident no longer warrants the Severity Level currently assigned to it based on its current impact on Customer's ability to use the Hosting Provider Programs for its business operations, then the Severity Level may be downgraded to a lower Severity Level that most accurately reflects the actual current impact. | | |
| H13 | 1 | 10 | H13.1.10 | Initial Service Request Severity Level | Hosting, SLA, Determining Service Request Severity Level (Initial Severity Level) | Hosting Provider and/or Customer shall set the initial Severity Level of a Service Request when submitting the SR via Hosting Provider Support, using defined Severity definitions. If a Service Request is created automatically by monitoring systems or other Tools, or otherwise initiated by Hosting Provider, an initial Severity Level will be assigned in accordance with SLA. Hosting Provider's initial focus, upon acceptance of a Service Request, will be to resolve the issues underlying the Service Request. The Severity Level of a Service Request may be upgraded or downgraded. | | |
| H13 | 1 | 11 | H13.1.11 | | Hosting, SLA, Determining Service Request Severity Level (Up Grade of Severity Level) | During the Service Request process, the Incident warrants the assignment of a higher Severity Level than that currently assigned based on its current impact on Customer's ability to use the Hosting Provider Programs for its business operations, then the Severity Level may be upgraded to a higher Severity Level that most accurately reflects the actual current impact. | | |
| H13 | 1 | 12 | H13.1.12 | Planned Outage | Hosting, SLA, Downtime Exceeds Anticipated Planned Outage Period | If, during a Planned Outage, it is determined that maintenance activities will require an extension of the period of time for such Planned Outage, Hosting Provider will be required to request an extension of such Planned Outage period (including an extension of the Maintenance Window) to accommodate the maintenance activities. | | |
| H13 | 1 | 13 | H13.1.13 | Data Center Location | Hosting, SLA, Hosting Provider Service Level Credit Earn Backs | Hosting Provider Environment(s) shall reside on Infrastructure located in the Continental/Contiguous United States (CONUS) at Hosting Provider's Data Center(s). Hosting Provider will provide you with no less than 90 days advance written notice in the event that Hosting Provider relocates the Infrastructure on which your Environment resides to a third party Data Center. | | |
| H13 | 1 | 14 | H13.1.14 | | Hosting, SLA, Maintenance | Customer may contact Hosting Provider's Hosting Provider Service Desk to provide Hosting Provider with additional information concerning an outstanding Service Request, in accordance with the following chart. Severity Level Hours of Operation of the Hosting Provider Hosting Provider Service Desk Support Hours ENGLISH(24x7x365) via phone, internet | | |
| H13 | 1 | 15 | H13.1.15 | Maintenance Window Availability | Hosting, SLA, Performance Against Statement of Work Service Level | During agreed to Minor Maintenance Windows, the Production Environments will be available. | | |
| H13 | 1 | 16 | H13.1.16 | Maintenance Window Availability | Hosting, SLA, Performance Against Statement of Work Service Level | During agreed to Major Maintenance Windows (twice annually), the Production Environments may be unavailable. | | |
| H13 | 1 | 17 | H13.1.17 | Emergency Maintenance | Hosting, SLA, Reporting | In the event that emergency maintenance is required, hosting provider(s) will provide advance notification of the maintenance. Unavailability of any Production Environment or Non-Production Environment due to the application of an emergency Change shall be considered a Planned Outage. | | |
| H13 | 1 | 18 | H13.1.18 | | Hosting, SLA, Service Level Credit Allocation | Hosting Provider will make available to Customer measurements and reports concerning Hosting Provider's performance against the Application Availability and Service Request Resolution Time Service Levels. | | |
| H13 | 1 | 19 | H13.1.19 | Service Levels and Formulas | Hosting, SLA, Service Request Process | The performance of the Computer and Administration Services shall be measured against the following three Service Levels: Application Availability, Service Request Resolution Time, and Performance Against Statement of Work. | | |
| H13 | 1 | 20 | H13.1.20 | Service Request Process | Hosting, SLA, Service Request Process | Hosting Providers shall establish the Service Request process which provides for diagnosis and resolution of Incidents reported in connection with the Hosting Provider Services. Either Hosting Provider or Customer may submit SRs as part of the Service Request process. Hosting Provider monitoring systems may also automatically generate SRs as alerts so that Hosting Provider and Customer may proactively take steps to avoid the potential occurrence of an Incident. | | |
| H13 | 1 | 21 | H13.1.21 | Service Request Process | Hosting, SLA, Service Request Resolution Time Service Level | Hosting Provider will follow the a predefined Service Request process, including related tasks and obligations. | | |
| H13 | 1 | 22 | H13.1.22 | Service Request Escalation | Hosting, SLA, Service Request Resolution Time Service Level | Hosting Provider will escalate Service Requests per the a predefined Service Request escalation process | | |

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| H13 | 1 | 23 | H13.1.23 | Service Request Resolution Time Monitoring | Hosting, SLA, Service Request Resolution Time Service Level | The Service Request Resolution Time Service Level shall be measured on a monthly basis for each SR Severity Level and calculated in accordance with the following formula: | | | |
| H13 | 1 | 24 | H13.1.24 | | Hosting, SLA, Service Request Resolution Time Severity Level 1 | For purposes of calculating Hosting Provider's performance against the Service Request Resolution Time Service Level or calculating any Service Level Credits, the measurement of Hosting Provider's time-to-resolve shall begin at applicable Service Request creation. | | | |
| H13 | 1 | 25 | H13.1.25 | Severity 1 Resolution Time | Hosting, SLA, Severity Level Definitions (Level 1) | The resolution time for severity 1 outages shall be 4 hours (Unplanned Outage caused by Infrastructure and/or application component); <98% of SRs resolved within target | | | |
| H13 | 1 | 26 | H13.1.26 | Severity 2 Resolution Time | Hosting, SLA, Severity Level Definitions (Level 1) | The resolution time for severity 2 outages shall be 48 hours; <98% of SRs resolved within target | | | |
| H13 | 1 | 27 | H13.1.27 | Severity Level 1 | Hosting, SLA, Severity Level Definitions (Level 1) | Severity level 1 shall be defined as an unplanned outage of a production environment where mission-critical business operations cannot reasonably continue and the situation is an emergency. Additional conditions include infrastructure outage, component failiure, environment unavailable, data corruption resulting in an operational halt, or an environmental "hang" with no response. All components, software, and interfaces being hosted by a hosting provider. | | | |
| H13 | 1 | 28 | H13.1.28 | Severity Level 2 | Hosting, SLA, Severity Level Definitions (Level 4) | Severity level 2 shall be defined as an unplanned outage of a non-production environment or a service interruption in a production environment causing critical impact to use of hosted software in one area of the business but not resulting in infrastructure outage. | | | |
| H13 | 1 | 29 | H13.1.29 | Severity Level 3 | Hosting, SLA, SLA Measurement Exclusions (Only Covers Production/DR) | Severity level 3 shall be defined as an error in expected or documented functionality severely impacting the business operations with no acceptable workaround. Business operations can continue in a restricted fashion | | | |
| H13 | 1 | 30 | H13.1.30 | Severity Level 4 | Hosting, SLA, SLA Measurement Exclusions (Production Go-Live) | Severity level 4 shall be defined as minor or no loss in expected or documented functionality which may be requests for information, enhancements, or clarification | | | |
| H13 | 1 | 31 | H13.1.31 | | Hosting, SLA, SLA Measurement Exclusions (Stabalization Period) | Service Levels will be measured and reported during the production phase, and Customer's eligibility to receive Service Level Credits shall be in accordance with the terms of this Schedule. | | | |
| H13 | 1 | 32 | H13.1.32 | | Hosting, SLA, Stabilization Period | Service Levels will not be measured and do not apply prior to Production Go-Live, and Service Level Credits will not be paid to Customer. | | | |
| H13 | 1 | 33 | H13.1.33 | | Hosting, SLA, Stabilization Period (length) | Service Levels will be measured and reported during a Stabilization Period, but Service Level Credits will not be paid during such period. | | | |
| H13 | 1 | 34 | H13.1.34 | | Hosting, SLA, Stabilization Period (not required) | The Hosting Provider has a Stabilization Period that is a ramp period following Changes to a Production Environment. | | | |
| H13 | 1 | 35 | H13.1.35 | | Hosting, SLA, Stabilization Period (required) | Each Stabilization Period will be seven calendar days in duration, commencing on the day that the Change is first made to the applicable Production Environment. However, depending on the nature of the Change and the impact on the applicable Production Environment, Hosting Provider and Customer will, as part of the Change Management process, mutually agree on a Stabilization Period of different scope or duration. | | | |
| H13 | 1 | 36 | H13.1.36 | | Hosting, SLA, Stabilization Period (required) | The following Changes may not require a Stabilization Period: The application of Maintenance Code Releases, including the application of tax updates, Mandatory operating system fixes or patches, Mandatory operating system fixes or patches, Changes to equipment or Infrastructure managed by Hosting Provider, Database fixes or patches, System maintenance required to maintain levels of functionality or security that is neither requested by, nor caused by Changes made by, Customer. | | | |
| H13 | 1 | 37 | H13.1.37 | Stabilization Period | Hosting, SLA, Updates on Resolution Progress | A Stabilization Period will be required for the following types of changes: initial implementation, point releases and major upgrades of software, introduction of CEMLIs, introduction of 3rd party software, and additional modules | | | |
| H13 | 1 | 38 | H13.1.38 | Service Request Status Visibility | Hosting, SLA, What Severity Levels Count | The service request and related processes shall support visibility such that submitters and other interested parties may review the progress of the service request | | | |
| H13 | 1 | 39 | H13.1.39 | Service Request Monitoring | Hosting, SLA, What Severity Levels Count | Hosting Provider(s) will proactively monitor, and regularly communicate to Customer on, the status of Severity Level 1 Unplanned Outage or Service Interruption Service Requests. | | | |
| H13 | 1 | 40 | H13.1.40 | | | Service Level Credits related to Hosting Provider's performance of the Computer and Administration Services against the Application Availability Service Level shall be calculated in accordance with the service level credit calculation | | | |
| H13 | 1 | 41 | H13.1.41 | | | The Contractor shall be held accountable to issue resolution standards as defined by the agreed upon SLA. | | | TC-62 |
| H13 | 1 | 42 | H13.1.42 | | | Solutions shall provide Service Level Agreement (SLA) monitoring and reporting capabilities. | | | Q4.3 |
| H13 | 1 | 43 | H13.1.43 | | | The contractor shall conduct non-routine maintenance during a mutually agreeable timeframe as defined by the agreed upon SLA. | | | TC-70 |
| H13 | 1 | 44 | H13.1.44 | | | The contractor shall provide routine maintenance periods as defined by the agreed upon SLA. | | | TC-69 |

## SOV Consolidated Non-Functional Requirements Traceability Matrix (RTM)

### Security Summary

| Base | Level | Sub | Req ID New | Focus | Specifics | Requirement Description | Notes | Evidence |
|---|---|---|---|---|---|---|---|---|
| S1 | 1 | 1 | S1.1.1 | SOV | | Hosting Provider will follow State of Vermont Secuirty Standards. http://dii.vermont.gov/Policy_Central | | |
| S1 | 1 | 2 | S1.1.2 | General Security | | Hosting Provider and Solutions shall comply with General Security standards outlined in S2A Security General and S2B Security General work sheets. | | |
| S1 | 1 | 3 | S1.1.3 | | | Hosting Provider and Solutions shall comply with Federal Security standards outlined in S3 Federal Security work sheets. | | |
| S1 | 1 | 4 | S1.1.4 | FIPS 199 Standards | | Hosting Provider will ensure Security controls of the Federal Security Services align with the functional requirements of a moderate impact security category under FIPS 199. | | |
| S1 | 1 | 5 | S1.1.5 | DoD Standards | | Solutions shall comply with DoD Directive 8552.01 | | |
| S1 | 1 | 6 | S1.1.6 | FISMA Standards | | Solutions shall comply with Federal Information Security Management Act (FISMA) of 2002 | | |
| S1 | 1 | 7 | S1.1.7 | NIST Standards | | Hosting Provider and Solutions shall comply with NIST standards outlined in S4A NIST 800 Series Summary and S4B NIST 800 Series Detail work sheets. | | |
| S1 | 1 | 8 | S1.1.8 | NIST Standards | | Hosting Provider will provide certified Infrastructure based on NIST 800-37, utilizing a combined security requirements framework consisting of controls in both NIST Special Publication 800-53 and DoD Directive 8500.2. | | |
| S1 | 1 | 9 | S1.1.9 | NIST DoD Standards | | Hosting Provider will align with the portions of NIST 800-37 and DoD Instruction 8510.01. Certification and Accreditation methodology, applicable to hosting providers performance of the services for all Infrastructure and shared services components that reside in the Federal Environment(s). | | |
| S1 | 1 | 10 | S1.1.10 | NIST DoD Standards | | Hosting Provider will conduct assessments based on security controls described in NIST 800-53 and DOD 8500.2. | | |
| | | 11 | S1.1.11 | HIPAA Standards | | Hosting Provider infrastructure and Hosting Provider Software shall comply with HIPAA standards. | | |
| S1 | 1 | 12 | S1.1.12 | HIPAA Standards | | (a) HIPAA administrative simplification. To the extent that the Exchange performs electronic transactions with a covered entity, the Exchange must use standards, implementation specifications, operating rules, and code sets adopted by the Secretary in 45 CFR parts 160 and 162.<br>(b) HIT enrollment standards and protocols. The Exchange must incorporate interoperable and secure standards and protocols developed by the Secretary in accordance with section 3021 of the PHS Act. Such standards and protocols must be incorporated within Exchange information technology systems. | | |
| S1 | 1 | 13 | S1.1.13 | HITECH Standards | | Solutions shall comply with the Health Information Technology for Economic and Clinical Health Act (HITECH) of 2009 | | |
| S1 | 1 | 14 | S1.1.14 | ACA | | Solutions shall comply with the Patient Protection and Affordable Care Act of 2010, Section 1561 Recommendations | | |
| S1 | 1 | 15 | S1.1.15 | | | Hosting Provider and Solutions shall comply with PHI and Privacy standards outlined in S6 PHI and Privacy work sheets. | | |
| S1 | 1 | 16 | S1.1.16 | | | Hosting Provider and Solutions shall comply with IRS 1075 standards outlined see Exhibit D. | | |
| S1 | 1 | 17 | S1.1.17 | FTI | | Solutions shall comply with the Safeguards for Protecting Federal Tax Returns and Return Information (26 U.S.C. § 6103 and related provisions). See Exhibit D. | | |
| S1 | 1 | 18 | S1.1.18 | PCI DSS | | Hosting Provider and Solutions shall comply with PCI/DSS standards. Solutions using credit/debit or other electronic funds transfer cards shall be compliant with Payment Card Industry (PCI) security standards. See Exhibit D. | | |

## SOV Consolidated Non-Functional Requirements Traceability Matrix (RTM)

### Security General

| Base | Level | Sub | Req ID New | Focus | Specifics | Requirement Description | Notes | Evidence |
|---|---|---|---|---|---|---|---|---|
| S2A | 1 | 1 | S2A.1.1 | Security General | HIPAA | Hosting Provider shall facilitate quarterly meetings shall be conducted between Hosting Provider and Customer to (i) review delivery of the services, (ii) identify any changes in HIPAA regulations, Vermont's business or ePHI Environments that may impact effectiveness or compliance of the service, and (iii) identify any additional services required to address new risks. | | |
| S2A | 1 | 2 | S2A.1.2 | Security General | | Hosting Provider provides database activity logging, monitoring, and reporting of the production database instances of the Hosting Provider ePHI Environments while protecting audit trails in Vermont's Environment. Included in the service are audit reports and Hosting Provider's recommendations on database events to be collected. Hosting Provider will work with Vermont to include additional unique database logging and auditing requirements. | | |
| S2A | 1 | 3 | S2A.1.3 | Security General | | Automated audit mechanisms (e.g., activity logging, monitoring, and reporting) shall be employed on databases. Audit reports shall be included with the hosting provider's recommendations. | | |
| S2A | 1 | 4 | S2A.1.4 | Security General | | --- | | |
| S2A | 1 | 5 | S2A.1.5 | Security General | | Data Masking is designed to obscure specific data elements and shall be used in non-production databases in Vermont's Hosting Provider ePHI Environments, by replacing actual, sensitive data identified by Vermont with false, simulated data. The objective of the service is to prevent ePHI contained in specific database fields, from being disclosed to unauthorized parties. | | |
| S2A | 1 | 6 | S2A.1.6 | Security General | | Database data shall be encrypted at the file system layer | | |
| S2A | 1 | 7 | S2A.1.7 | Security General | | Hosting Provider will create and review a security assessment checklist to be included in Vermont's Periodic Maintenance Plan. In addition, Hosting Provider will review the scan results from the QualysGuard scans provided in the Base Services and include recommendations for updates, including any recommendations for remediation to any identified vulnerabilities, in Vermont's Periodic Maintenance Plan. | | |
| S2A | 1 | 8 | S2A.1.8 | Security General | | Hosting Provider will conduct annual reviews of Vermont's Hosting Provider Hosting Provider network router configurations. | | |
| S2A | 1 | 9 | S2A.1.9 | Security General | | Hosting Provider will conduct an annual network and application penetration test for Vermont's Production Hosting Provider ePHI Environment and provide a report on the results of the network and application penetration test to Vermont. | | |
| S2A | 1 | 10 | S2A.1.10 | Security General | | The hosting provider shall monitor, alert, and protect against web application attacks of internet-facing applications. Hosting Provider will install, configure, and manage a web application firewall on Vermont's internet-facing Hosting Provider ePHI Environments. | | |
| S2A | 1 | 11 | S2A.1.11 | Security General | | --- | | |
| S2A | 1 | 12 | S2A.1.12 | Security General | | --- | | |
| S2A | 1 | 13 | S2A.1.13 | Security General | | --- | | |
| S2A | 1 | 14 | S2A.1.14 | Security General | | Hosting services shall be delivered and managed remotely by Hosting Provider, 24 hours a day, 7 days a week, 365 days a year. | | |
| S2A | 1 | 15 | S2A.1.15 | Security General | | Hosting Provider(s) shall conduct an annual risk assessment of ePHI environments against the HIPAA controls to ensure compliance and provide findings to Vermont | | |
| S2A | 1 | 16 | S2A.1.16 | Security General | | Hosting Provider ePHI Environments shall be included in HIPAA Compliance assessment performed by a qualified third party auditor, and provide Vermont with the summary information from the third party assessment report. | | |
| S2A | 1 | 17 | S2A.1.17 | Security General | | Hosting Provider shall conduct quarterly scans of Vermont's externally accessible web service on the Production Environment, and provide reports on the scans, including the severity of the vulnerabilities and remediation recommendations. | | |

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| S2A | 1 | 18 | S2A.1.18 | Security General | | Hosting provider shall create and provide to Vermont, a network diagram with connections to ePHI, including any wireless networks and connected entities. | | |
| S2A | 1 | 19 | S2A.1.19 | Security General | | Hosting Provider shall deploy, monitor and manage third party host-based Data Loss Prevention (HDLP) software on the Windows workstations of Hosting Provider support personnel. The HDLP software is designed to monitor Hosting Provider Hosting Provider DBA and system administration activity and alert for, or block, potential unauthorized access | | |
| S2A | 1 | 20 | S2A.1.20 | Security General | | Hosting Provider shall provide Operating System management to protect against dictionary and brute force attacks. | | |
| S2A | 1 | 21 | S2A.1.21 | Security General | | Access to ePHI Servers shall be restricted to those employees who have completed HIPAA training. | | |
| S2A | 1 | 22 | S2A.1.22 | Security General | | Hosting Provider will conduct quarterly reviews of the firewall policies and network devices configurations for Vermont's Hosting Provider ePHI Environments. | | |
| S2A | 1 | 23 | S2A.1.23 | Security General | | Network router configurations shall be reviewed annually | | |
| S2A | 1 | 24 | S2A.1.24 | Security General | | Hosting Provider shall monitor for, and provide alerts of, unauthorized changes to certain system and application files that would be a sign of a possible Environment compromise. As part of the service, Hosting Provider will perform file integrity monitoring on Vermont's servers within the Hosting Provider ePHI Environments following the file integrity monitoring policies agreed upon by Hosting Provider and Vermont. | | |
| S2A | 1 | 25 | S2A.1.25 | Security General | | An internal and external QualysGuard assessment shall be performed quarterly to understand vulnerabilities in Vermont's Environment and includes quarterly external and internal QualysGuard scans of the servers hosting Vermont's Production Environment and QualysGuard reports on the scans. | | |
| S2A | 1 | 26 | S2A.1.26 | Security General | | Strong authentication shall be employed in all deployment environments | | |
| S2A | 1 | 27 | S2A.1.27 | Security General | | Self-registered users of applications shall have identities verified per NIST SP800-63 | | |
| S2A | 1 | 28 | S2A.1.28 | Security General | | HBE-related Solutions shall proof identities based on requirements set forth by CMS | | |
| S2A | 1 | 29 | S2A.1.29 | Security General | | Solutions shall have the ability to assign users to multiple OMS (Organization Management System) organizations with different applications and roles | | |
| S2A | 1 | 30 | S2A.1.30 | Security General | | Solutions shall have the ability to manage atomic-to-composite role mappings | | |
| S2A | 1 | 31 | S2A.1.31 | Security General | | Solutions shall have the ability to provide better performance for applications that use fine-grained policies (bulk security) | | |
| S2A | 1 | 32 | S2A.1.32 | Security General | | Solutions shall support Federal Identity, Credential, and Access Management ("FICAM") Roadmap and Implementation Guidelines | | |
| S2A | 1 | 33 | S2A.1.33 | Security General | | Solutions shall support Protection of PII data | | |
| S2A | 1 | 34 | S2A.1.34 | Security General | | Solutions shall integrate with federal security services for identity proofing and multi-factor authentication | | |
| S2A | 1 | 35 | S2A.1.35 | Security General | | module design and implementation must take into account security standards and controls as documented by NIST | | |
| S2A | 1 | 36 | S2A.1.36 | Security General | | Project participants and other individuals shall not transmit or store any Personally Identifiable Information (PII) using storage publically available, over the Internet or any wireless communication device, unless: 1) the PII is "de-identified" in accordance with 45 C.F.R § 164.514(b) (2); or 2) encrypted in accordance with applicable law, including the American Recovery and Reinvestment Act of 2009 and as required by policies and procedures established by the Customer. | | |
| S2A | 1 | 37 | S2A.1.37 | Security General | | All Solutions shall adhere to applicable state and federal laws regarding Privacy and Security, as well as the policies and procedures set forth in the Agreement. | | |
| S2A | 1 | 38 | S2A.1.38 | Security General | | Solutions will provide a mechanism to securely authorize staff and customers to access the authorized functionality. | | |
| S2A | 1 | 39 | S2A.1.39 | Security General | | Solutions will define the level of access that will be granted to each particular role. | | |
| S2A | 1 | 40 | S2A.1.40 | Security General | | Solutions will utilize encryption algorithms and implementations, in compliance with National Institute of Standards and Technology. | | |

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| S2A | 1 | 41 | S2A.1.41 | Security General | | The Solutions will have a potential fraud detection function. | | |
| S2A | 1 | 42 | S2A.1.42 | Security General | | Solutions will define by department, role, and/or individual employee/user, the access levels and privilege set to create, read, update/change, or delete data. This includes definitions at the customer level. | | |
| S2A | 1 | 43 | S2A.1.43 | Security General | | Solutions will define the data elements displayed to users based on privilege set/ role | | |
| S2A | 1 | 44 | S2A.1.44 | Security General | | User privileges shall be periodically audited | | |
| S2A | 1 | 45 | S2A.1.45 | Security General | | Solutions will identify and define access roles for cross-organizational information systems | | |
| S2A | 1 | 46 | S2A.1.46 | Security General | | Solutions will ensure the interfaces use the appropriate security protocol per the classification of data being exchanged with external partners | | |
| S2A | 1 | 47 | S2A.1.47 | Security General | | Solutions will log all unsuccessful login attempts. | | |
| S2A | 1 | 48 | S2A.1.48 | Security General | | Application and technology components shall integrate and rely on the centralized IdM infrastructure | | |
| S2A | 1 | 49 | S2A.1.49 | Security General | | The Hosting Provider shall ensure that the Solution and Service Center complies with all applicable State of Vermont Information Security Policies. | | |
| S2A | 1 | 50 | S2A.1.50 | Security General | | The Solutions will enforce a single system identify for each unique user involved with the Exchange. | | |
| S2A | 1 | 51 | S2A.1.51 | Security General | | The Solution will be able to establish family or household linkages between individual accounts. | | |
| S2A | 1 | 52 | S2A.1.52 | Security General | | The Solution shall provide intrusion detection and prevention services. | | |
| S2A | 1 | 53 | S2A.1.53 | Security General | | The Solution shall provide Certificate Authority for secure server side transactions. | | |
| S2A | 1 | 54 | S2A.1.54 | Security General | | The Solution shall provide a complete user provisioning and de-provisioning Solution to support achievement of the privacy and security requirements as defined by the Exchange. | | |
| S2A | 1 | 55 | S2A.1.55 | Security General | | The Solution shall support user account authenticaion procedures with configurable parameters (time, cipher strength, logon attempts, etc.). | | |
| S2A | 1 | 56 | S2A.1.56 | Security General | | The Solution shall support account retirement and deactivation requirements as determined by Exchanbe identity management policies and procedures. | | |
| S2A | 1 | 57 | S2A.1.57 | Security General | | The Solution shall support issue and manage public key certificates for secure transactions. | | |
| S2A | 1 | 58 | S2A.1.58 | Security General | | The Solution shall support the ability to verify and validate identity via public key certificates for secure transactions. | | |
| S2A | 1 | 59 | S2A.1.59 | Security General | | The Solution shall support the ability to delegate or utilize 3rd party authentication services for specific transactions via an external trust and authentication | | |
| S2A | 1 | 60 | S2A.1.60 | Security General | | The Solution shall comply with industry standards and regulations to include, but not limited to the following: Privacy and transaction standards, Federal civil rights laws, Standards adopted by the Secretary under Section 1104 of the Affordable Care Act (ACA), Standards and protocols adopted by the Secretary under Section 1561 of the ACA including NIST SP 800-52, 800-53i, 800-77, or 800-113 or others as specified in the federal Information Processing Standards (FIPS) Publication 140–2, AND IEEE standards and PMI guidelines. | | |
| S2A | 1 | 61 | S2A.1.61 | Security General | | The Solution shall support penetration testing from external vendors. | | |
| S2A | 1 | 62 | S2A.1.62 | Security General | | The Solution shall maintain strict access controls to safeguard all areas where Exchange data could be accessed. | | |
| S2A | 1 | 63 | S2A.1.63 | Security General | | The sholution shall implement correct plans from internal and external risk assessment and vulnerability testing and/or external (3rd Party) HIPAA audit/review that discusses thrests, vulnerabilities and impacts, including network and web application. | | |
| S2A | 1 | 64 | S2A.1.64 | Security General | | The Solution shall implement a provisiong, review, and de-provisioning scheme for user identification, authentication and authorization, including activation and de-activation. | | |

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| S2A | 1 | 65 | S2A.1.65 | Security General | | The Solution shall manage user profiles including defining access to data types and security credentials. | | |
| S2A | 1 | 66 | S2A.1.66 | Security General | | The Solution shall allow users to reset passwords and unlock locked accounts from a web portal interface. | | |
| S2A | 1 | 67 | S2A.1.67 | Security General | | The Solution shall pass credentials for authentication and authorization from the Exchange Solution to authenticate system access to web service transactions. | | |
| S2A | 1 | 68 | S2A.1.68 | Security General | | The Solution shall restrict access to user, provider, or organizational data to authorized users. | | |
| S2A | 1 | 69 | S2A.1.69 | Security General | | The Solution shall ensure non-repudiation as part of digital signature verification to prevent data from being altered, deleted or damaged during exchange. | | |
| S2A | 1 | 70 | S2A.1.70 | Security General | | The Solution shall have the ability to set automatic alerts to system administrators when a breach pattern or unauthorized use activity is detected. | | |
| S2A | 1 | 71 | S2A.1.71 | Security General | | The Solution shall support "user exits" or a "pluggable authentication module" (PAM) to enable user transition between the Solution and local systems that are authorized as third party connections to the Solution. | | |
| S2A | 1 | 72 | S2A.1.72 | Security General | | The Solution shall implement and support two-factor authentication (i.e. two kinds of evidence). | | |
| S2A | 1 | 73 | S2A.1.73 | Security General | | The Solution shall provide the ability for web service providers and service consumers to interact via the Solution. | | |
| S2A | 1 | 74 | S2A.1.74 | Security General | | The Solution shall provide the ability to implement security for transport and messaging via web services. | | |
| S2A | 1 | 75 | S2A.1.75 | Security General | | The Solution shall track all access so that an audit report of an individual's information can be provided to the individual if requested. | | |
| S2A | 1 | 76 | S2A.1.76 | Security General | | The Solution shall provide ability to the Customer to disable all types of user accounts. | | |
| S2A | 1 | 77 | S2A.1.77 | Security General | | The Solution shall provide security administration functionality to apply user permissions based on roles to accommodate access controls that align with federal (ANSI) standards for Role Based Access Controls. | | |
| S2A | 1 | 78 | S2A.1.78 | Security General | | --- | | |
| S2A | 1 | 79 | S2A.1.79 | Security General | | The Solution shall provide the same security provisions for the development, system test, acceptance test and training environment as those used in the production environment. | | |
| S2A | 1 | 80 | S2A.1.80 | Security General | | The contractor shall ensure that the Exchange Solution system documentation is protected from unauthorized access. | | |
| S2A | 1 | 81 | S2A.1.81 | Security General | | The Contractor shall define all initial user security roles and access permissions as defined by the State to ensure users are able to access the system at system go-live. | | |
| S2A | 1 | 82 | S2A.1.82 | Security General | CHIP Compliand | Module design must take into account Medicaid and Child Health Insurance Program privacy protections specified under Code of Federal Regulations (CFR), Title 42, sections 431.300 to .307 and 457.1110. | | |
| S2A | 1 | 83 | S2A.1.83 | Security General | FIMA Compliant | Modules must also comply with the Federal Information Security Management Act of 2002 (FISMA). | | |
| S2A | 1 | 84 | S2A.1.84 | Security General | HIPAA Compliar | Modules must comply with the Health Insurance Portability and Accountability Act of 1996 (HIPAA) security and privacy requirements, including standards soon to be promulgated | | |
| S2A | 1 | 85 | S2A.1.85 | Security General | Existing Identity | Healthcare-related Solutions shall utilize or comply with existing data field, validation methods, and policies for identity management. | | |
| S2A | 1 | 86 | S2A.1.86 | Security General | | Solutions shall support identification, authentication, and authorization management. | | |
| S2A | 1 | 87 | S2A.1.87 | Security General | | Public facing Solutions shall provide a mechanism for customers to register for an account. | | |
| S2A | 1 | 88 | S2A.1.88 | Security General | | Public facing Solutions shall allow customers to manage their user account. | | |
| S2A | 1 | 89 | S2A.1.89 | Security General | | Solutions shall provide a mechanism to control user access. | | |
| S2A | 1 | 90 | S2A.1.90 | Security General | | Solutions shall provide a mechanism to authenticate users. | | |

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| S2A | 1 | 91 | S2A.1.91 | Security General | | Solutions and security-related technology components shall provide a mechanism to administer password policies. | | |
| S2A | 1 | 92 | S2A.1.92 | Security General | | Solutions shall support administration password policies. | | |
| S2A | 1 | 93 | S2A.1.93 | Security General | | Solutions will secure data to maintain customer privacy. | | |
| S2A | 1 | 94 | S2A.1.94 | Security General | | The Solution will gather, store and maintain, as confidential, personal income data to establish eligibility for coverage (i.e., Income tax returns, Social Security number). | | |
| S2A | 1 | 95 | S2A.1.95 | Security General | | Suggest changing system to Solution. See next. The Solution will gather, store, and maintain, as confidential, information necessary to determine individual eligibility for a Qualified Health Plan, regardless of whether the individual qualifies for an Exemption to purchase or enroll. | | |
| S2A | 1 | 96 | S2A.1.96 | Security General | | Solutions will comply with relevant security laws, policies, processes and standards. | | |
| S2A | 1 | 97 | S2A.1.97 | Security General | | Solutions will ensure that data is secured and only accessible to authorized individuals | | |
| S2A | 1 | 98 | S2A.1.98 | Security General | | Solutions will safeguard computer systems, peripherals and assets. | | |
| S2A | 1 | 99 | S2A.1.99 | Security General | | Solutions will protect customer information from unauthorized disclosure. | | |
| S2A | 1 | 100 | S2A.1.100 | Security General | Directory Attribute Naming | Directory attributes shall conform to VT naming standards and core set of attributes | | |
| S2A | 1 | 101 | S2A.1.101 | Security General | Virtual Directory Services | Identity Management systems shall be implemented using a 'virtual directory' model in order to abstract directory sources and improve maintainability. | | |
| S2A | 1 | 102 | S2A.1.102 | Security General | Directory Separation | Separate directories shall be used for employees and external users. Additional directory segmentation TBD | | |
| S2A | 1 | 103 | S2A.1.103 | Security General | Directory LDAP Accessibility | Directories shall be accessible via the LDAP protocol | | |
| S2A | 1 | 104 | S2A.1.104 | Security General | SSO | Solutions shall utilize SSO components for authentication and authorization | | |
| S2A | 1 | 105 | S2A.1.105 | Security General | | The Solution shall have role based access control at the data field level | | |
| S2A | 1 | 106 | S2A.1.106 | Security General | | The Solution shall have the capability to automatically deactivate staff/employee account if there has been no log-in for a specified time (e.g. 90 days) | | |
| S2A | 1 | 107 | S2A.1.107 | Security General | CMS | Hosting Provider shall complete and supply to the Customer all CMS Security required documentation to include but not limited to System Security Plan (SSP), Risk Assessment (RA), Contingency Plan (CP). | | |

## SOV Consolidated Non-Functional Requirements Traceability Matrix (RTM)

### Security General B

| Base | Level | Sub | Req ID New | Focus | Specifics | Requirement Description | Notes | Evidence |
|---|---|---|---|---|---|---|---|---|
| S2B | 1 | 1 | S2B.1.1 | Hosting, General Security Services | | Security assessments shall be performed prior to releasing solutions into production | | |
| S2B | 1 | 2 | S2B.1.2 | Hosting, General Security Services, | | --- | | |
| S2B | 1 | 3 | S2B.1.3 | Hosting, General Security Services, | | --- | | |
| S2B | 1 | 4 | S2B.1.4 | Hosting, General Security Services, | | Failure of a Hosting Provider employee to adhere to the Hosting Provider Data Privacy Policy and Information Security Policy may result in disciplinary action in accordance with Hosting Provider policies. | | |
| S2B | 1 | 5 | S2B.1.5 | Hosting, General Security Services, | | --- | | |
| S2B | 1 | 6 | S2B.1.6 | Hosting, General Security Services, | | --- | | |
| S2B | 1 | 7 | S2B.1.7 | Hosting, General Security Services, | | --- | | |
| S2B | 1 | 8 | S2B.1.8 | Hosting, General Security Services, | | --- | | |
| S2B | 1 | 9 | S2B.1.9 | Hosting, General Security Services, | | --- | | |
| S2B | 1 | 10 | S2B.1.10 | Hosting, General Security Services, Access Control | | Access to logs shall be provided on a need to know and Least Privilege basis. Log files should be protected by SHA1 cryptographic hash sum and are monitored. Logs on intranet-accessible systems are relocated daily to systems that are not intranet-accessible. | | |
| S2B | 1 | 11 | S2B.1.11 | Hosting, General Security Services, Access Control | | Access control shall refer to the policies, procedures, and Tools that govern the access to and use of resources within Vermont's Environment. Examples of resources include, but are not limited to, a physical Server, a file, a directory, a service running on an operating system, a table in a database, or a network protocol. | | |
| S2B | 1 | 12 | S2B.1.12 | Hosting, General Security Services, Access Control | | Least Privilege shall be employed for all solutions. | | |
| S2B | 1 | 13 | S2B.1.13 | Hosting, General Security Services, Access Control Policy | | Default-deny is a network-oriented approach that implicitly denies the transmission of all network traffic, and then specifically allows only required network traffic based on protocol, port, source, and destination. | | |
| S2B | 1 | 14 | S2B.1.14 | Hosting, General Security Services, Access Control to Program Source Code | | Prior to deployment, all new deployments of technology or software in the Hosting Provider Data Centers shall undergo a security technical review by a cross-organization team including a dedicated security team. Technology or tools that do not meet Hosting Provider's security policies or standards shall not deployed. | | |
| S2B | 1 | 15 | S2B.1.15 | Hosting, General Security Services, Annual Testing | | The incident commander is responsible for making sure appropriate reports are generated after each security incident. Two commonly used reports are a Root Cause Analysis and investigation report. | | |
| S2B | 1 | 16 | S2B.1.16 | Hosting, General Security Services, Annual Testing | | The ISIRP is tested at least once, but not more than twice, every twelve months. Information Security Incident Response management appoints an ISIRC to conduct the testing. Chief-Level (e.g. a CEO, a CIO or a CTO) executive approval is required for unscheduled testing. | | |
| S2B | 1 | 17 | S2B.1.17 | Hosting, General Security Services, Annual Testing | | The Hosting Provider shall periodically test its incident response procedures under the direction of an incident commander, on an annual basis at minimum. At the conclusion of each test, the commander must submit a gap analysis report to incident response management along with recommendations for corrective actions. | | |
| S2B | 1 | 18 | S2B.1.18 | Hosting, General Security Services, Asset Classification and Control | | Hosting Provider will maintain a Hosting Provider Information Security Policy which describes the principles for development, executive approval, implementation, and maintenance of all information security policies and practices at Hosting Provider. Includes governing principles such as 'need to know', Least Privilege, and segregation of duties. All employees, contractors and temporary employees are subject to the Hosting Providers Information Security Policy. | | |
| S2B | 1 | 19 | S2B.1.19 | Hosting, General Security Services, Asset Control Responsibilities | | Upon termination of services, Hosting Provider shall return information held in paper form to Customer or destroyed in accordance with the Hosting Provider Information Protection Policy. | | |
| S2B | 1 | 20 | S2B.1.20 | Hosting, General Security Services, Audits | | --- | | |
| S2B | 1 | 21 | S2B.1.21 | Hosting, General Security Services, Backup and Recovery Procedure | | --- | | |
| S2B | 1 | 22 | S2B.1.22 | Hosting, General Security Services, Backup and Recovery Procedure | | Combination of disk and tape backups to protect Vermont data. Procedures are in place for regular backup protection with a defined timeline and scheduling. Backups of Vermont data take place using dedicated backup servers and tape libraries. Unless otherwise required by law, backup tapes are labeled and shipped to a secure, fire-safe off-site storage vault facility managed by a Payment Card Industry (PCI) Data Security Standard certified Third Party Vendor where they are retained in accordance with requirements. The backup tapes are transported to the off-site facility on a daily basis by the third party storage vendor. Processes for archiving and retrieving material from the off-site storage vendor are documented. | | |
| S2B | 1 | 23 | S2B.1.23 | Hosting, General Security Services, Backup and Recovery Procedure | | --- | | |
| S2B | 1 | 24 | S2B.1.24 | Hosting, General Security Services, Backup and Recovery Procedure | | --- | | |
| S2B | 1 | 25 | S2B.1.25 | Hosting, General Security Services, Backup and Recovery Procedure | | Backup media shall be shipped to the off-site facility on a daily basis | | |
| S2B | 1 | 26 | S2B.1.26 | Hosting, General Security Services, Backup and Recovery Procedure | | Processes for archiving and retrieve backup media from off-site storage shall be documented and followed | | |
| S2B | 1 | 27 | S2B.1.27 | Hosting, General Security Services, Backup and Recovery Procedure | | The data stored in the backup tapes is encrypted using strong cryptography (AES-256 bit) and a True Random Number Generator (TRNG) for the generation of strong keys for each tape where the keys are unique to Customer. Customer will be provided a process to decrypt encrypted tapes. Administrative access to the key management system is role-based. Administrators of multiple systems are required to make material changes to the key management system. | | |
| S2B | 1 | 28 | S2B.1.28 | Hosting, General Security Services, Backup and Recovery Procedure | | All backup media shall be encrypted using strong cryptography (AES-256) and a True Random Number Generator (TRNG). | | |
| S2B | 1 | 29 | S2B.1.29 | Hosting, General Security Services, Backup and Recovery Procedure | | Administrative access to key management system is role-based. | | |

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| S2B | 1 | 30 | S2B.1.30 | Hosting, General Security Services, Backup and Recovery Procedure | | Encryption keys are maintained in more than one Data Center located in the contiguous United States ("lower 48", CONUS). | | |
| S2B | 1 | 31 | S2B.1.31 | Hosting, General Security Services, Breach Policy | | Vermont is provided with Servers and storage that are physically and logically isolated from the Servers and storage of other Hosting Provider customers Access controls are multi-tiered, consisting of the network, system, database and application layers. All access is authorized on a Default-deny basis. | | |
| S2B | 1 | 32 | S2B.1.32 | Hosting, General Security Services, Breach Policy | | Third-party hosting services (i.e, servers, storage) shall be physically separated and logically isolcated from other customers' components. | | |
| S2B | 1 | 33 | S2B.1.33 | Hosting, General Security Services, Breach Policy | | Access controls to network, system, database, and application layers shall be multi-tiered and accessible on a default-deny basis | | |
| S2B | 1 | 34 | S2B.1.34 | Hosting, General Security Services, Breach Policy | | Hosting Provider shall share relevant Breach, Security, and Enforcement policies with the Customer | | |
| S2B | 1 | 35 | S2B.1.35 | Hosting, General Security Services, Chain of Custody | | Hosting Provider shall utilize a single point of contact ("commander") for security incidents. The commander shall assume the command and control of Incident response efforts. A core team evaluates, contains, eradicates, and recovers from security Incidents and a communications team identifies, coordinates, and develops pertinent communications for internal parties. An extended team consists of senior management in corporate communications (PR), legal, Human Resources, privacy, and security and identifies, coordinates and develops pertinent communications for external parties, including any legally required reporting. An advanced Incident support team completes security assessments and digital forensics analysis in an effort to ensure that chain of custody is maintained. The ISIRC is required to submit a lessons-learned report to Information Security Incident Response management at the conclusion of security Incident response efforts. ISIRT members involved in the security incident response are encouraged to provide feedback on the lessons learned from each Incident. | | |
| S2B | 1 | 36 | S2B.1.36 | Hosting, General Security Services, Clear Desk and Clear Screen | | --- | | |
| S2B | 1 | 37 | S2B.1.37 | Hosting, General Security Services, Clear Desk and Clear Screen | Screen Lock | --- | | |
| S2B | 1 | 38 | S2B.1.38 | Hosting, General Security Services, Cloud Services Risk Management | | Hosting Provider shall maintain a Security Organization Policy describing and clarifying the roles and responsibilities of various teams and individuals involved in information security at Hosting Provider. | | |
| S2B | 1 | 39 | S2B.1.39 | Hosting, General Security Services, Communications and Operations Management | | Environmental conditions shall be maintained to meet manufacturer recommended specifications for operating temperature, relative humidity and power consumption. | | |
| S2B | 1 | 40 | S2B.1.40 | Hosting, General Security Services, Compliance with Laws and the European Union Data Privacy Directive | | --- | | |
| S2B | 1 | 41 | S2B.1.41 | Hosting, General Security Services, Compliance with Laws and the European Union Data Privacy Directive | | --- | | |
| S2B | 1 | 42 | S2B.1.42 | Hosting, General Security Services, Compliance with Laws and the European Union Data Privacy Directive | | --- | | |
| S2B | 1 | 43 | S2B.1.43 | Hosting, General Security Services, Compliance with Laws and the European Union Data Privacy Directive | | Hosting Provider and its subsidiaries shall subscribe to an agreement under which any Hosting Provider subsidiary handling Customer data adopts safeguards consistent with those between the Hosting Provider and the Customer for Hosting Provider Services. | | |
| S2B | 1 | 44 | S2B.1.44 | Hosting, General Security Services, Confidentiality | | --- | | |
| S2B | 1 | 45 | S2B.1.45 | Hosting, General Security Services, Confidentiality Agreements | | --- | | |
| S2B | 1 | 46 | S2B.1.46 | Hosting, General Security Services, Cryptographic Controls | Hosting provider connection methodologies | Hosting Provider shall support a variety of external connection methodologies to provide wide area network (WAN) connectivity between Vermont's Environment and Vermont's networks. | | |
| S2B | 1 | 47 | S2B.1.47 | Hosting, General Security Services, Data Center Physical Controls | | Hosting Provider shall have a formal process for employment terminations to ensure sufficent protection of information. After a termination is processed, automated notifications are issued for terminations (regardless of type) based on the effective date of the termination. The recipient list for the notifications includes all necessary parties. Access to systems is terminated immediately and if necessary, escorted off premise. | | |
| S2B | 1 | 48 | S2B.1.48 | Hosting, General Security Services, Data Center Physical Controls | | --- | | |
| S2B | 1 | 49 | S2B.1.49 | Hosting, General Security Services, Data Center Physical Controls | | --- | | |
| S2B | 1 | 50 | S2B.1.50 | Hosting, General Security Services, Data Center Physical Controls | | --- | | |
| S2B | 1 | 51 | S2B.1.51 | Hosting, General Security Services, Data Center Physical Controls | | Only employees, Third Party Vendors, and contractors on an approved sponsor list, or visitors with prior approval, are allowed to enter Hosting Provider's Data Centers. | | |
| S2B | 1 | 52 | S2B.1.52 | Hosting, General Security Services, Data Center Physical Controls | | Access to Hosting Provider's Data Centers by visitors must be approved by Data Center senior management in advance of the visit; requests for such visits must include the anticipated duration of the visit. | | |

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| S2B | 1 | 53 | S2B.1.53 | Hosting, General Security Services, Data Center Physical Controls | | Hosting Provider data center visitors must provide proof of their identity. Such proof must consist of a photo ID issued by Hosting Provider or a government. The visitor is then documented on a sign-in sheet and issued a temporary badge. | | |
| S2B | 1 | 54 | S2B.1.54 | Hosting, General Security Services, Data Center Physical Controls | | Visitors to the Hosting Provider Data Center(s) shall be banned from possessing weapons, recording devices and alcohol while on Data Center premises. | | |
| S2B | 1 | 55 | S2B.1.55 | Hosting, General Security Services, Data Center Physical Controls | | Visitor badges for the Hosting Provider Data Center(s) shall be inventoried on a nightly basis. Any badge identified as missing shall be immediately deactivated. | | |
| S2B | 1 | 56 | S2B.1.56 | Hosting, General Security Services, Data Center Physical Controls | | Hosting Provider Data Center doors shall be linked to a security application running on a secure host. The application is used to zone the building and grant access to areas on an as needed basis. Access lists for each Data Center are reviewed monthly. Upon an employee's termination or transfer from a Data Center, the employee's access privileges are revoked. | | |
| S2B | 1 | 57 | S2B.1.57 | Hosting, General Security Services, Data Center Physical Controls | | --- | | |
| S2B | 1 | 58 | S2B.1.58 | Hosting, General Security Services, Data Center Physical Controls | | Physical access to Hosting Provider Service Locations shall be limited to Hosting Provider's employees, subcontractors, and authorized visitors. | | |
| S2B | 1 | 59 | S2B.1.59 | Hosting, General Security Services, Data Center Physical Controls | | Hosting Provider Data Center employees, subcontractors, and authorized visitors shall be issued identification cards that must be worn while on the premises. | | |
| S2B | 1 | 60 | S2B.1.60 | Hosting, General Security Services, Data Center Physical Controls | | Visitors to Hosting Provider Data Center(s) are required to sign a visitor's register, be escorted and/or observed when they are on the premises, and/or be bound by the terms of a confidentiality agreement. | | |
| S2B | 1 | 61 | S2B.1.61 | Hosting, General Security Services, Data Center Physical Controls | | Hosting Provider's Security monitors the possession of keys/access cards and the ability to access the Hosting Provider Data Center(s). Employees leaving employment must return keys/cards immediately. | | |
| S2B | 1 | 62 | S2B.1.62 | Hosting, General Security Services, Data Center Physical Controls | | After-hours access to Hosting Provider Data Center(s) shall be monitored and controlled by Hosting Provider Security. | | |
| S2B | 1 | 63 | S2B.1.63 | Hosting, General Security Services, Data Privacy and Security Compliance | | The Hosting Provider Chief Privacy Officer and Hosting Provider Legal department, working in conjunction with Hosting Provider security organizations, develop and manage the implementation of and compliance with the Hosting Provider Data Privacy Policies. | | |
| S2B | 1 | 64 | S2B.1.64 | Hosting, General Security Services, Database Security | | All deployment environments shall be configured with the same security and compliance standards whether production or non-production. | | |
| S2B | 1 | 65 | S2B.1.65 | Hosting, General Security Services, Database Security | | Write access to the product databases is restricted to database administrators with the exception that Vermont has the ability to grant an End User access to update interface tables and CEMLI schema objects. | | |
| S2B | 1 | 66 | S2B.1.66 | Hosting, General Security Services, Database Security | | Vermont and its Implementer may be granted management rights and write access to Non-Production Environments and, based on role, to the custom database schemas in all environments if compliance and security controls can be maintained. | | |
| S2B | 1 | 67 | S2B.1.67 | Hosting, General Security Services, Enforcement, Security | | Each permanent or contract employee who handles data is required to complete a data privacy awareness training course. The course instructs employees on the definitions of data privacy and personal data, recognizing risks relating to personal data, understanding their responsibilities for data, and reporting any suspected privacy violations. Employees handling data are also required to complete training in corporate ethics. Additionally, employees involved in development of custom code are required to attend secure coding training. | | |
| S2B | 1 | 68 | S2B.1.68 | Hosting, General Security Services, Environment/Application Security | | --- | | |
| S2B | 1 | 69 | S2B.1.69 | Hosting, General Security Services, Environmental Controls | | Hosting Provider Security shall authorize all repairs and modifications to the security barriers or entry controls at Hosting Provider Data Center(s). | | |
| S2B | 1 | 70 | S2B.1.70 | Hosting, General Security Services, Exchange of Information | | Encrypted tapes and disk drives in servers and mass storage devices are required to be sanitized and destroyed at the end of life. (The sanitization process for encrypted tapes requires deletion of the encryption key in order to make the data stored in the tape unrecoverable. Server disk drives are sanitized by degaussing them. Hosting Provider Data Centers maintain a designated area to store defective or expired media until such media is sanitized and transferred to authorized Third Party Vendors for secure destruction, unless such media is degaussed immediately.) | | |
| S2B | 1 | 71 | S2B.1.71 | Hosting, General Security Services, Exchange of Information | | Encrypted tapes and disk drives in servers and mass storage devices are required to be sanitized and destroyed at end of life. | | |
| S2B | 1 | 72 | S2B.1.72 | Hosting, General Security Services, Exchange of Information | | Encryption keys used for tapes shall be destroyed when tapes are sanitized. | | |
| S2B | 1 | 73 | S2B.1.73 | Hosting, General Security Services, Exchange of Information | | Server disk drives shall be sanitized by degaussing. | | |
| S2B | 1 | 74 | S2B.1.74 | Hosting, General Security Services, Exchange of Information | | Hosting Provider Data Center(s) shall maintain designated areas to store defective or expired media until sanitized and/or transported to third party for secure destruction. | | |
| S2B | 1 | 75 | S2B.1.75 | Hosting, General Security Services, File Transfer | | Designated Hosting Provider personnel handle removable digital media and prepare it for transportation according to defined procedures. Digital media is logged, securely transported, and vaulted by an off-site Third Party Vendor. The vendor is contractually obligated to comply with Hosting Provider-defined terms for media protection. Digital media and printed media are handled in accordance with the Hosting Provider Information Protection Policy. | | |
| S2B | 1 | 76 | S2B.1.76 | Hosting, General Security Services, Firewalls | | Routers shall provide the connection point between Hosting Provider Infrastructure and the Internet Service Provider(s) (ISP) facilitating site-to-site VPN connections between Vermont's and Hosting Provider's networks. Border routers are deployed in a fully redundant, fault tolerant configuration connecting to different ISPs. Border Gateway Protocol (BGP) is configured to provide route convergence in the event of an ISP link failure. Routers are deployed with access lists configured to enforce traffic policies at the perimeter adding an additional level of security. | | |
| S2B | 1 | 77 | S2B.1.77 | Hosting, General Security Services, Harden Network Devices | SSL Load balancing | Server load balancers (SLBs) with built-in SSL accelerators shall be deployed in redundant pairs to offload processor-intensive SSL transactions from Servers and shall be configured as a secure reverse proxy to prevent direct unmonitored access to application Servers on the public middle tier. | | |
| S2B | 1 | 78 | S2B.1.78 | Hosting, General Security Services, Hardening | | A security assessment to identify known operating system vulnerabilities shall be performed against Certified Configurations prior to their release. | | |

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| S2B | 1 | 79 | S2B.1.79 | Hosting, General Security Services, Hardening | | Operating system hardening shall be performed in a controlled environment as part of detailed build procedures for Certified Configurations and includes: | | |
| S2B | 1 | 80 | S2B.1.80 | Hosting, General Security Services, Hardening | | All servers shall have operating systems hardened by eliminating any unnecessary system services, accounts, network services, limited user access rights throughout the environments. | | |
| S2B | 1 | 81 | S2B.1.81 | Hosting, General Security Services, Health Insurance Portability and Accountability Act (HIPAA) Compliance | | --- | | |
| S2B | 1 | 82 | S2B.1.82 | Hosting, General Security Services, Health Insurance Portability and Accountability Act (HIPAA) Compliance | | --- | | |
| S2B | 1 | 83 | S2B.1.83 | Hosting, General Security Services, Hosting Provider's Business Continuity Management Program | | In the event of a security incident, the Hosting Provider shall be responsible for collecting and retaining evidence related to the incident. | | |
| S2B | 1 | 84 | S2B.1.84 | Hosting, General Security Services, Hosting Provider's Business Continuity Management Program | | Hosting Provider shall have a global business continuity management program covering Hosting Provider's staff, information assets, and critical business processes in the event of a natural or man-made crisis or disaster. The program relates specifically to Hosting Provider's internal business continuity, and is implemented through company-wide training, integrated implementation, ongoing testing of emergency response, crisis management, and disaster recovery practices. The program is executed through local, regional, event-specific, and travel-focused crisis management teams. | | |
| S2B | 1 | 85 | S2B.1.85 | Hosting, General Security Services, Incident Response Plan Growth and Development | | Hosting Provider shall use a multi-stage process when responding to a security incident. | | |
| S2B | 1 | 86 | S2B.1.86 | Hosting, General Security Services, Independent Review of Information Security | | All Hosting Provider employees and contractors that may have access to Vermont data shall be subject to a written confidentiality agreement. Prior to performing services for Hosting Provider and prior to accessing any Hosting Provider system or resource, service providers are required to sign a Services Provider Agreement, a Network Access Agreement, and a work order defining the services to be provided. | | |
| S2B | 1 | 87 | S2B.1.87 | Hosting, General Security Services, Information Access Restriction | | Hosting Provider does not restrict the period during which connections to information resources are allowed. | | |
| S2B | 1 | 88 | S2B.1.88 | Hosting, General Security Services, Information Classification Guidelines | | All information assets shall have an owner who is responsible for the protection and inventory of assets based on the sensitivity and value of information. If ownership has not been assigned, it will default to the administrators of the application or system. This includes maintenance of operations guides and other documentation describing the environments. | | |
| S2B | 1 | 89 | S2B.1.89 | Hosting, General Security Services, Information Disposal | | Hosting Provider shall not disclose Customer data except in accordance with the Statement of Work, subsequent written instructions by Customer, or as required by law. | | |
| S2B | 1 | 90 | S2B.1.90 | Hosting, General Security Services, Information Disposal | | Upon termination of the services, or at Vermont's request, and following return of a copy of Vermont data, Hosting Provider shall erase Vermont data on any type of information storage systems located at a Hosting Provider facility from which the services are provided in accordance with the Hosting Provider Media Sanitization and Disposal Policy (unless there is a legal obligation imposed on Hosting Provider preventing the deletion of all or part of the data). Vermont's data is erased in a manner designed to destroy boot partitions, file pointers, and user data that resides on the media to prevent the data from being reconstructed and read through ordinary means. | | |
| S2B | 1 | 91 | S2B.1.91 | Hosting, General Security Services, Information Labeling and Handling | | --- | | |
| S2B | 1 | 92 | S2B.1.92 | Hosting, General Security Services, Information Security Incident Response – Reporting Breaches | | Hosting Providers shall subscribe to vulnerability notification systems to stay apprised of security incidents, advisories, and other related information. Hosting Provider shall take actions on the notification of a threat or risk once it has the opportunity to confirm that both a valid risk exists and that the recommended changes are applicable to Hosting Provider environments. | | |
| S2B | 1 | 93 | S2B.1.93 | Hosting, General Security Services, Information Security Incident Response – Reporting Breaches | | --- | | |
| S2B | 1 | 94 | S2B.1.94 | Hosting, General Security Services, Information Security Incident Response – Reporting Breaches | | Hosting Provider IT operations staff are instructed in addressing Incidents where handling of data may have been unauthorized, including prompt and reasonable reporting, escalation procedures, and chain of custody practices, to secure relevant evidence. | | |
| S2B | 1 | 95 | S2B.1.95 | Hosting, General Security Services, Information Security Incident Response – Reporting Breaches | | --- | | |
| S2B | 1 | 96 | S2B.1.96 | Hosting, General Security Services, Information Security Incident Response Plan | | In the event of a security incident, an incident report will be completed and reviewed with Vermont | | |
| S2B | 1 | 97 | S2B.1.97 | Hosting, General Security Services, Information Security Incident Response Plan | | The Hosting Provider shall update and maintain an incident response plan periodically for accuracy and effective information security Incident response planning. This document is made available to Information Security Incident Response Team (ISIRT) members, systems and network administrators, information security managers, data privacy personnel and business professionals who are responsible for preparing and responding to, information security Incidents. | | |
| S2B | 1 | 98 | S2B.1.98 | Hosting, General Security Services, Information Security Incident Response Plan | | With regard to security incidents, Information sharing shall be allowed on a need to know basis only. | | |

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| S2B | 1 | 99 | S2B.1.99 | Hosting, General Security Services, Information Security Incident Response Plan | | Risk team members shall make detailed records from the onset of data misappropriation incidents based on templates pre-defined by the Hosting Provider. | | |
| S2B | 1 | 100 | S2B.1.100 | Hosting, General Security Services, Information Systems Acquisition, Development, and Maintenance | | --- | | |
| S2B | 1 | 101 | S2B.1.101 | Hosting, General Security Services, Intrusion Detection | | Integrity of the data-in-transit shall be protected through the use of strong encryption (TLS/SSL or IPSec) protocols. Hosting Provider shall configure an nHashed Message Authentication Code - Secure Hash Algorithm (HMAC-SHA-1) on all IPSec VPN networks to verify that the contents of the transmission have not been altered in transit. | | |
| S2B | 1 | 102 | S2B.1.102 | Hosting, General Security Services, IPSec Virtual Private Network (VPN) | Cryptographic controls IPSec and SSL | Cryptographic controls shall be implemented using IPSec and SSL protocols to provide end users, whether they are Vermont's End Users or Hosting Provider support engineers, with secure access to the target applications. | | |
| S2B | 1 | 103 | S2B.1.103 | Hosting, General Security Services, IPSec Virtual Private Network (VPN) | VPN | Hosting Provider shall require the implementation of IPSec as part of an overall VPN strategy for securing Vermont data between endpoints on external network connections. IPSec security associations (SAs) are configured using the IP Encapsulating Security Payload (ESP) protocol in tunneling security mode. Key exchange is accomplished through Internet Security Association Key Management Protocol (ISAKMP) using Diffie-Hellman public key techniques with the following IPSec parameters: | | |
| S2B | 1 | 104 | S2B.1.104 | Hosting, General Security Services, IPSec Virtual Private Network (VPN) | VPN Tunnel | VPN tunnel endpoints shall be encrypted with (minimally) 168-bit Triple DES | | |
| S2B | 1 | 105 | S2B.1.105 | Hosting, General Security Services, ISO 27001 Certification for the Information Security System | | --- | | |
| S2B | 1 | 106 | S2B.1.106 | Hosting, General Security Services, ISO 27002 Certificate of Conformance | | --- | | |
| S2B | 1 | 107 | S2B.1.107 | Hosting, General Security Services, ISO 27002 Certificate of Conformance | | Hosting provider(s) shall comply with HIPAA and HITECH security controls for relevant health care-based components. | | |
| S2B | 1 | 108 | S2B.1.108 | Hosting, General Security Services, ISO 27002 Certificate of Conformance | | --- | | |
| S2B | 1 | 109 | S2B.1.109 | Hosting, General Security Services, Legal Compliance | | The Hosting Provider's business continuity management program shall address the following in the event of a disaster: Facilitate expedient internal and external, global communications, Ensure continuity of key functions in a work around manner until normalcy is restored, and Ensure recovery of computing/technology infrastructure and services. | | |
| S2B | 1 | 110 | S2B.1.110 | Hosting, General Security Services, Legally Required Disclosures | | --- | | |
| S2B | 1 | 111 | S2B.1.111 | Hosting, General Security Services, Limitation of Connection Time | | Duration of active sessions shall be limited on all VPN, operating system, administrative application, and network device accounts. | | |
| S2B | 1 | 112 | S2B.1.112 | Hosting, General Security Services, Log Review | | Logs with security-relevant information shall be retained for up to three months, and may be kept online or offline. Hosting Provider(s) may choose to expand retention periods, particularly if an anomalous system event or series of events occur that could constitute an information security incident. | | |
| S2B | 1 | 113 | S2B.1.113 | Hosting, General Security Services, Log Review | | Hosting Provider utilizes a Security Information and Event Management (SIEM) system to correlate and alert on Intrusion Detection System security events, firewall log events, and network flow events. The SIEM system is monitored 24 hours per day, seven days per week, 365 days per year. | | |
| S2B | 1 | 114 | S2B.1.114 | Hosting, General Security Services, Log Security | | Hosting Provider shall review logs for forensic purposes and incidents, and any anomalous activities are incorporated into the incident management process. | | |
| S2B | 1 | 115 | S2B.1.115 | Hosting, General Security Services, Logging | | --- | | |
| S2B | 1 | 116 | S2B.1.116 | Hosting, General Security Services, Logging | | Hosting Provider(s) shall log security-related activities on operating systems, applications, databases, and network devices. Systems are configured to log access to the Environment or Hosting Provider Programs, as well as system alerts, console messages, and system errors. Hosting Provider implements controls to protect against operational problems, including log file media becoming exhausted, failing to record events, and/or logs being overwritten. Security-related log entries shall capture the following information: date, time, time zone, user account name and/or IP address, original value, location of change (hostname, filename, tablename), new value (other than password). | | |
| S2B | 1 | 117 | S2B.1.117 | Hosting, General Security Services, Media Handling and Disposal | | Hosting Provider shall employ intrusion detection systems to provide continuous surveillance for intercepting and responding to security events as they are identified. | | |
| S2B | 1 | 118 | S2B.1.118 | Hosting, General Security Services, Media Handling and Disposal | | Customer data shall not be stored on any type of removable drive or medium unless the information is encrypted. | | |
| S2B | 1 | 119 | S2B.1.119 | Hosting, General Security Services, Media Handling and Disposal | | Sensitive information in hard copy paper form is required to be disposed of in a shredder or secure disposal container. Electronic data is erased or disposed of in accordance with Hosting Provider's and/or Vermont's Media Sanitization and Disposal Policy. | | |
| S2B | 1 | 120 | S2B.1.120 | Hosting, General Security Services, Media Handling and Disposal | | --- | | |
| S2B | 1 | 121 | S2B.1.121 | Hosting, General Security Services, Media Handling and Disposal | | Hosting Provider shall use a unique series of tape barcode or other machine readable identification label on all tapes used for backup or other purposes. | | |
| S2B | 1 | 122 | S2B.1.122 | Hosting, General Security Services, Media Handling and Disposal | | Hosting Provider shall label all tapes used for data or backup purposes as confidential. | | |
| S2B | 1 | 123 | S2B.1.123 | Hosting, General Security Services, Mobile Computing and Teleworking | | --- | | |

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| S2B | 1 | 124 | S2B.1.124 | Hosting, General Security Services, Mobile Computing and Teleworking | | Remote access for Hosting Provider employees and subcontractors requires all connections to the Hosting Provider network from a non-Hosting Provider location to use either an IPSec or SSL-encrypted VPN. | | |
| S2B | 1 | 125 | S2B.1.125 | Hosting, General Security Services, Mobile Computing and Teleworking | | Hosting Provider support engineers are required to use 2-factor authentication to authenticate over a VPN through the HPISN to access Vermont's Environment. | | |
| S2B | 1 | 126 | S2B.1.126 | Hosting, General Security Services, Monitoring | | Hosting Provider shall access Vermont's data only for the purpose of providing the services or as required by law, in accordance with the scope of services. Hosting Provider does not and will not: Change Vermont data, other than with Vermont's approval and as required for the performance of the services, have any role in determining or maintaining the accuracy of Vermont data, control Vermont's access to its data, except to the extent that access is restricted via physical and logical access controls as part of the services | | |
| S2B | 1 | 127 | S2B.1.127 | Hosting, General Security Services, Monitoring | | Hosting provider will not monitor Vermont's use of or access to Vermont data except as necessary to provide the services | | |
| S2B | 1 | 128 | S2B.1.128 | Hosting, General Security Services, Network Access Controls | Screen Positioning | Employees, vendors, and subcontractors are required to position screens to prevent inadvertent visual disclosure and to not leave confidential information unattended or unsecured when not in use. | | |
| S2B | 1 | 129 | S2B.1.129 | Hosting, General Security Services, Network Connection Control | | --- | | |
| S2B | 1 | 130 | S2B.1.130 | Hosting, General Security Services, Network Routing Control | | --- | | |
| S2B | 1 | 131 | S2B.1.131 | Hosting, General Security Services, Network Security Management | | Restoration of data is tested annually. | | |
| S2B | 1 | 132 | S2B.1.132 | Hosting, General Security Services, Organizational Security | | --- | | |
| S2B | 1 | 133 | S2B.1.133 | Hosting, General Security Services, Organizational Security Infrastructure | | External audits against Hosting Provider Hosting Provider controls will be supplied to Vermont. | | |
| S2B | 1 | 134 | S2B.1.134 | Hosting, General Security Services, Outbound Internet Access | Network device hardening | Network device configurations shall be hardened by performing the following: Disabling telnet access, Controlling Simple Network Management Protocol (SNMP) access to devices, Controlling access to devices through the use of Terminal Access Controller Access Control System Plus (TACACS+), turn off unneeded services, perform appropriate level of logging. | | |
| S2B | 1 | 135 | S2B.1.135 | Hosting, General Security Services, Password Use | Data Usage | All Vermont employees, subsidiaries, vendors (e.g., Hosting Provider(s)) and subcontractors shall observe Hosting Provider policies concerning the treatment of information, including access, use, disclosure, storage, processing, recording, handling, and disposal of Vermont data residing on an Hosting Provider hosted Server. | | |
| S2B | 1 | 136 | S2B.1.136 | Hosting, General Security Services, Payment Card Industry Data Security Standard | | --- | | |
| S2B | 1 | 137 | S2B.1.137 | Hosting, General Security Services, Physical Media in Transit | | Hosting Provider maintains master service agreements with various Third Party Vendors for services and products. Specific controls are defined and agreed upon to secure Vermont data in transit and storage. Hosting Provider maintains a contract with a Third Party Vendor for the transportation and storage of Vermont backup tapes. | | |
| S2B | 1 | 138 | S2B.1.138 | Hosting, General Security Services, Privilege Management | Privilege Management | Hosting Provider shall provision access through a centralized account provisioning system that is integrated with its human resources database. Access privileges are granted based on job role and require management approval. | | |
| S2B | 1 | 139 | S2B.1.139 | Hosting, General Security Services, Protection Against Malicious Code | | A Production Assessment status report is prepared and provided to Vermont to identify whether Vermont's Environment has been properly prepared. | | |
| S2B | 1 | 140 | S2B.1.140 | Hosting, General Security Services, Protection Against Malicious Code | | Hosting Provider's Desktop and Laptop Security Policy requires that all computers connected to internal network have anti-virus software installed and strongly recommends that employees have a local firewall and desktop asset management software installed. Anti-virus software must be scheduled to perform daily definition updates and virus scans. Additionally, all employees with computers running the Windows operating system are recommended to have the Windows Software Update Service (WSUS) service installed with automatic updates activated. | | |
| S2B | 1 | 141 | S2B.1.141 | Hosting, General Security Services, Protection Against Malicious Code | | All personal computing devices connected to the Hosting Provider's internal network shall have anti-virus software installed and operational with daily updates to virus definitions and scans. Windows-based computing devices shall have Windows Software Update Services and SMS installed with automated updating. | | |
| S2B | 1 | 142 | S2B.1.142 | Hosting, General Security Services, Protection Against Malicious Code | | Hosting Provider shall keep anti-virus products and WSUS servers up-to-date with virus definitions and security updates. Is responsible for notifying internal system users of any credible virus threats and when WSUS security updates are available. | | |
| S2B | 1 | 143 | S2B.1.143 | Hosting, General Security Services, Protection Against Malicious Code | | Hosting Provider employees shall comply with instructions received through e-mail, and are responsible for promptly reporting to the employee helpdesk any virus, or suspected virus infection that cannot be resolved by anti-virus software. | | |
| S2B | 1 | 144 | S2B.1.144 | Hosting, General Security Services, Protection Against Malicious Code | | Hosting Provider employees shall be prohibited from altering, disabling, or removing anti-virus software and the WSUS service from any computer. Any employee who is discovered violating this standard may be subject to disciplinary action, up to and including termination. | | |
| S2B | 1 | 145 | S2B.1.145 | Hosting, General Security Services, Protection Against Malicious Code | | Hosting Provider personnel shall be required to install approved full disk encryption software on their laptops, which uses a strong encryption algorithm. | | |
| S2B | 1 | 146 | S2B.1.146 | Hosting, General Security Services, Protection Against Malicious Code | | Hosting Provider Server Security Policy requires all Windows servers to run up-to-date anti-virus software and to have SMS patch management. | | |
| S2B | 1 | 147 | S2B.1.147 | Hosting, General Security Services, Protection Against Malicious Code | | Hosting Provider shall license and install Third Party Vendor anti-virus and anti-spam products to scan all employee and Vermont email and inbound attachments that traverse either Vermont's dedicated servers located at Hosting Provider's Data Centers. | | |
| S2B | 1 | 148 | S2B.1.148 | Hosting, General Security Services, Protection Against Malicious Code (HIPAA) | | Hosting Provider Email infrastructure servers, by default, have "opportunistic encryption" using TLS, which allows encryption on both inbound and outbound emails depending on the capabilities of Vermont's email systems. Vermonts may request to enforce encryption using TLS for its emails traversing the Hosting Providers email infrastructure. | | |

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| S2B | 1 | 149 | S2B.1.149 | Hosting, General Security Services, Responsibility | | A chain of custody process shall be used for security incidents to maintain and document the chronological history of evidence. Each person collecting, processing, and handling evidence must record the date and time they received the evidence, and any action taken on the evidence. | | |
| S2B | 1 | 150 | S2B.1.150 | Hosting, General Security Services, Responsibility, Inventory, and Ownership of Assets | | The Hosting Providers Information Protection Policy shall provide guidelines for all Hosting Providers personnel regarding information classification schemes and minimum handling requirements associated with those classifications in an effort to ensure protection of Hosting Proviser and Vermont information assets. | | |
| S2B | 1 | 151 | S2B.1.151 | Hosting, General Security Services, Review of Access Rights | Database Password Expiry | Database passwords shall be maintained by Hosting Provider operations and changed a minimum of every 180 days. | | |
| S2B | 1 | 152 | S2B.1.152 | Hosting, General Security Services, Secure Code Training | | Hosting Provider will provide any appropriate notices and/or obtain any required consents relating to its collection and use of Vermont data, including any such consents necessary for Hosting Provider to provide the Hosting Provider Services. | | |
| S2B | 1 | 153 | S2B.1.153 | Hosting, General Security Services, Secure Login Procedures | | --- | | |
| S2B | 1 | 154 | S2B.1.154 | Hosting, General Security Services, Secure Login Procedures | | Access to operating systems shall be controlled by a secure login procedure that requires a unique user ID and a strong password. | | |
| S2B | 1 | 155 | S2B.1.155 | Hosting, General Security Services, Secure Login Procedures | | Root passwords of hosts and facilities must be scheduled to change every 30 days. This applies to any and all servers for Vermont hosted in Vermont or at a third-party hosting provider | | |
| S2B | 1 | 156 | S2B.1.156 | Hosting, General Security Services, Secure Sockets Layer (SSL) | VPN SSL | Hashed Message Authentication Code - Secure Hash Algorithm (HMAC-SHA-1) shall be used to prevent message corruption with VPN tunnels | | |
| S2B | 1 | 157 | S2B.1.157 | Hosting, General Security Services, Security Awareness Education and Training | | Hosting Provider employees shall be required to maintain the confidentiality of Vermont data. Employees are required to sign a confidentiality agreement and comply with company policies concerning protection of confidential information (Code of Ethics and Business Conduct, Hosting Provider Acceptable Use Policy for Company Resources, and the Information Protection Policy) as part of their initial terms of employment. Hosting Provider obtains a written confidentiality agreement from each subcontractor before that subcontractor provides services. | | |
| S2B | 1 | 158 | S2B.1.158 | Hosting, General Security Services, Security Awareness Education and Training | | --- | | |
| S2B | 1 | 159 | S2B.1.159 | Hosting, General Security Services, Security of System Files | | The Environments shall undergo a security assessment process that includes review of the Hosting Provider Programs, hardware and operating system components. Finally, any new Releases are installed in a shared staging environment for final validation prior to Production Go-Live. | | |
| S2B | 1 | 160 | S2B.1.160 | Hosting, General Security Services, Security Requirements Analysis and Specification | | Hosting Providers who also develop/integration software/solutions shall have those business units separate from the hosting business unit | | |
| S2B | 1 | 161 | S2B.1.161 | Hosting, General Security Services, Security Requirements Analysis and Specification | | Hosting Provider will deploy Hosting Provider programs through a Certified Configuration which are assessed for exposure to a variety of both common and complex attack types and vulnerabilities. | | |
| S2B | 1 | 162 | S2B.1.162 | Hosting, General Security Services, Security Requirements Analysis and Specification | | The Hosting Provider Programs are deployed on a Server(s) in accordance with the Certified Configuration and/or detailed build procedures. A standard "KickStart" image is used to install the operating system and a package manager is then used to automatically install the utility programs required for the type of Server being configured. Finally, the file system is built and the Hosting Provider Programs are installed from standard images. Hardening procedures are embedded within a Certified Configuration. | | |
| S2B | 1 | 163 | S2B.1.163 | Hosting, General Security Services, Security Services | | Hosting Provider will limit direct administrative access to Vermont's S&U data residing in the Federal Environment at Hosting Providers Data Center(s) to only those employees who are U.S. citizens. Individuals born in the United States and/or granted citizenship status by Immigration and Naturalization Services (INS) are considered U.S. citizens. | | |
| S2B | 1 | 164 | S2B.1.164 | Hosting, General Security Services, Segregation in Networks | Outbound network access | Outbound Internet access shall be enabled by default for all hosted Servers within Hosting Provider networks through secure web proxies and restricted portsInbound or direct Internet access from the hosted Servers bypassing web proxies shall not permitted. | | |
| S2B | 1 | 165 | S2B.1.165 | Hosting, General Security Services, Segregation in Networks | Segregation in Networks | Hosting Provider's Data Centers shall contain (at least) two isolated network environments used to deliver Hosting Services. | | |
| S2B | 1 | 166 | S2B.1.166 | Hosting, General Security Services, Segregation of Duties | | The SOPs describe the detailed activities and tasks undertaken by Hosting Provider employees when delivering services and provide direction for those activities. These SOPs are managed centrally and are available to authorized employees. | | |
| S2B | 1 | 167 | S2B.1.167 | Hosting, General Security Services, Sensitive System Isolation | | Database auditing will be enabled. | | |
| S2B | 1 | 168 | S2B.1.168 | Hosting, General Security Services, Sensitive System Isolation | | Production Environments shall be isolated from Non-Production Environments. | | |
| S2B | 1 | 169 | S2B.1.169 | Hosting, General Security Services, Sensitive System Isolation | | All deployment environments shall be isolated from one another. | | |
| S2B | 1 | 170 | S2B.1.170 | Hosting, General Security Services, Server load balancers (SLBs) | SSL Certificate Procurement | SSL shall be used for all web-based SSL certified applications. Hosting providers shall procure SSL certificates on Vermont's behalf using VeriSign Corporation as the Certification Authority (CA). | | |
| S2B | 1 | 171 | S2B.1.171 | Hosting, General Security Services, Session Time Out | | Servers shall enable default log file settings for auditing critical events | | |
| S2B | 1 | 172 | S2B.1.172 | Hosting, General Security Services, SSAE and ISAE Reports and Other Audits | | --- | | |
| S2B | 1 | 173 | S2B.1.173 | Hosting, General Security Services, SSAE and ISAE Reports and Other Audits | | --- | | |

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| S2B | 1 | 174 | S2B.1.174 | Hosting, General Security Services, SSAE and ISAE Reports and Other Audits | | --- | | |
| S2B | 1 | 175 | S2B.1.175 | Hosting, General Security Services, Standard Operating Procedures | | Hosting Provider shall align with the IT service management process areas as outlined in the Information Technology Infrastructure Library (ITIL) and uses this framework as a guide for operational delivery. Hosting Provider's internal documentation specifies current operational processes and procedures for employees' performance of technical functions related to all services and environments. | | |
| S2B | 1 | 176 | S2B.1.176 | Hosting, General Security Services, System Acceptance | | Capacity planning and management shall occur throughout the hosting life cycle. | | |
| S2B | 1 | 177 | S2B.1.177 | Hosting, General Security Services, System Acceptance | | --- | | |
| S2B | 1 | 178 | S2B.1.178 | Hosting, General Security Services, System Acceptance | | The Hosting Provider shall perform and publish an assessment prior to production go-live to ensure functionality, configuration, supportability, security, and performance are within specification. | | |
| S2B | 1 | 179 | S2B.1.179 | Hosting, General Security Services, System Acceptance | | --- | | |
| S2B | 1 | 180 | S2B.1.180 | Hosting, General Security Services, System Passwords | Passowrd Confidentiality | Passwords shall be treated as confidential information. | | |
| S2B | 1 | 181 | S2B.1.181 | Hosting, General Security Services, System Planning | | Hosting Provider shall have security and privacy requirements in its service provider contracts, which address issues such as physical and logical security requirements, privacy protection, breach reporting, and auditing. In addition, as security requirements or services change, subcontractor contracts are changed accordingly upon renewal. | | |
| S2B | 1 | 182 | S2B.1.182 | Hosting, General Security Services, System Planning | | --- | | |
| S2B | 1 | 183 | S2B.1.183 | Hosting, General Security Services, Terminations | | Hosting Provider shall conduct Security reviews, assessments, and audits periodically to confirm compliance with the Hosting Providers Information Security Policy, procedures, and practices. | | |
| S2B | 1 | 184 | S2B.1.184 | Hosting, General Security Services, Third Party Service Delivery | | --- | | |
| S2B | 1 | 185 | S2B.1.185 | Hosting, General Security Services, Unattended Hosting Provider Employee Equipment | Password Confidentiality and Strength | The use of passwords is addressed in the Hosting Provider Password Policy. Hosting Provider employees shall follow rules for password length and complexity and keep their passwords confidential and secure at all times. Passwords shall not be disclosed to any unauthorized person, but under certain circumstances, passwords may be communicated between authorized Hosting Provider employees for the purpose of providing support services. | | |
| S2B | 1 | 186 | S2B.1.186 | Hosting, General Security Services, Use of System Utilities | | Access to the operating system is restricted to named user accounts mapped to individual users with a valid role-based access requirement approved by the user's management through the Customer's or Hosting Provider's access provisioning process. | | |
| S2B | 1 | 187 | S2B.1.187 | Hosting, General Security Services, User Authentication for External Connections | User Authentication for External Connections | Hosting Provider shall employ network controls to address the protection and control of Customer data during its transmission from one end system to another. All computers, Servers, and other data devices connected to the Hosting Provider network must comply with Hosting Provider standards for security, configuration, and access method, in accordance with the Hosting Provider policies. | | |
| S2B | 1 | 188 | S2B.1.188 | Hosting, General Security Services, User Identification and Authentication | | Operating system access is preceded by identity validation through a login process requiring a unique id and strong password | | |
| S2B | 1 | 189 | S2B.1.189 | Hosting, General Security Services, User Password Management | User Password Management Dependencies | Authorization shall be dependent on authentication since controlling access to specific resources depends upon establishing an entity or individual's identity. All Hosting Provider authorization decisions for granting, approval, and review of access are based on the following principles: Need to know: does the user require this access for their job function? Segregation of duties: will the access result in a conflict of interest? | | |
| S2B | 1 | 190 | S2B.1.190 | Hosting, General Security Services, User Password Management | User Password Strong Password Policy | Hosting Provider shall enforce strong password policies for Hosting Provider network, operating system, and database accounts in an effort to reduce the chances of intruders gaining access to the Environment through exploitation of user accounts and their associated passwords. | | |
| S2B | 1 | 191 | S2B.1.191 | Hosting, General Security Services, User Password Management | Password Strength | Passwords must meet the following characteristics for any software application: minimum of eight characters long, Contain at least one upper case character and at least one number or special character, Expire every ninety days, Cannot be a common word or name, cannot contain any part of a username. | | |
| S2B | 1 | 192 | S2B.1.192 | Hosting, General Security Services, User Password Management | Password Strength Audit | Passwords shall be peridocially audited to ensure they comply with the Password Strength requirements | | |
| S2B | 1 | 193 | S2B.1.193 | Hosting, General Security Services, User Registration | User Registration | The Hosting Provider Logical Access Controls Policy is applicable to access control decisions for all Hosting Provider employees and any information processing facility for which Hosting Provider has administrative authority. The policy does not apply to publicly accessible Internet-facing Hosting Provider systems or Vermont's End Users. | | |
| S2B | 1 | 194 | S2B.1.194 | Hosting, General Security Services, User Responsibilities | Network OS Account Review | Network and operating system accounts shall be reviewed regularly in an effort to ensure the appropriate employee access levels. | | |
| S2B | 1 | 195 | S2B.1.195 | Hosting, General Security Services, Vermont Regulatory Compliance | | Vermont data located on Hosting Provider systems, including text and images, may be disclosed as required by law without prior consent of Vermont. Hosting Provider will use diligent efforts to inform Vermont, to the extent permitted by law, of any request for such disclosure before disclosure is made. | | |

## SOV Consolidated Non-Functional Requirements Traceability Matrix (RTM)

### Security General

| Base | Level | Sub | Req ID New | Focus | Specifics | Requirement Description | Notes | Evidence |
|---|---|---|---|---|---|---|---|---|
| S3 | 1 | 1 | S3.1.1 | Federal Security | Hosting, Code of Ethics and Business Conduct | The Hosting Provider has a Code of Ethics and Business Conduct document that sets forth Hosting Provider's high standards for moral ethics and business conduct at every level of the organization, and at every location where Hosting Provider does business. The standard applies to Hosting Provider employees, independent contractors, and temporary employees; it covers the areas of legal and regulatory compliance and business conduct and relationships. Compliance-tracked training in ethics and business conduct and sensitive information handling is required once every two years. | | |
| S3 | 1 | 2 | S3.1.2 | Federal Security | General | Hosting Provider will provide dedicated physical and virtual infrastructure to Vermont | | |
| S3 | 1 | 3 | S3.1.3 | Federal Security | General | --- | | |
| S3 | 1 | 4 | S3.1.4 | Federal Security | Data Sensitivity Classification | Hosting Provider will provide storage to and provide access to Sensitive But Unclassified Vermont data. | | |
| S3 | 1 | 5 | S3.1.5 | Federal Security | U.S. Citizen Support | Hosting Provider will provide a United States citizen-only support model for access to Vermont data in the Federal Environment. | | |
| S3 | 1 | 6 | S3.1.6 | Federal Security | General | Hosting Provider will provide certified Infrastructure based on NIST 800-37, utilizing a combined security requirements framework consisting of controls in both NIST Special Publication 800-53 and DoD Directive 8500.2. | | |
| S3 | 1 | 7 | S3.1.7 | Federal Security | General | Hosting Provider will set up of Vermont's Production Environment, Production Support Environment(s), and Non-Production Environments within the Federal Environment. | | |
| S3 | 1 | 8 | S3.1.8 | Federal Security | General | Hosting Provider will provide Maintenance of the Vermont Federal Environment Infrastructure. | | |
| S3 | 1 | 9 | S3.1.9 | Federal Security | Certification and Accreditation | Hosting Provider will limit data in the Federal Environment to Unclassified data. | | |
| S3 | 1 | 10 | S3.1.10 | Federal Security | Certification and Accreditation | Hosting Provider will align with the portions of NIST 800-37 and DoD Instruction 8510.01. Certification and Accreditation methodology, applicable to hosting providers performance of the services for all Infrastructure and shared services components that reside in the Federal Environment(s). | | |
| S3 | 1 | 11 | S3.1.11 | Federal Security | Certification and Accreditation | Hosting Provider will conduct assessments based on security controls described in NIST 800-53 and DOD 8500.2. | | |
| S3 | 1 | 12 | S3.1.12 | Federal Security | Connectivity to Restricted Networks | Hosting Provider will provide Vermont information and access reasonably needed by Vermont to complete its Vermont Certification and Accreditation. | | |
| S3 | 1 | 13 | S3.1.13 | Federal Security | Connectivity to Restricted Networks | Hosting Provider will provide appropriate connection approval process if additional connectivity to resitricted networks is required. | | |
| S3 | 1 | 14 | S3.1.14 | Federal Security | Data Sensitivity Classification | --- | | |
| S3 | 1 | 15 | S3.1.15 | Federal Security | Data Sensitivity Classification | Hosting Provider will set security policies for data that is Sensitive But Unclassified (SBU). Federal Environment is not required to store or process Classified data. | | |
| S3 | 1 | 16 | S3.1.16 | Federal Security | DoD Mission Assurance Category | Hosting Provider will provide a description of the functional properties of the controls used on the Federal Environment. The description of the functional properties of the controls is intended to provide sufficient detail to permit analysis and testing of the controls. | | |
| S3 | 1 | 17 | S3.1.17 | Federal Security | General | Hosting Provider will ensure Federal Security Services are available for all Disaster Recovery Services and Environments. | | |
| S3 | 1 | 18 | S3.1.18 | Federal Security | General | Hosting Provider will ensure Security controls of the Federal Security Services align with the functional requirements of a moderate impact security category under FIPS 199. | | |
| S3 | 1 | 19 | S3.1.19 | Federal Security | Certification and Accreditation | Hosting Provider will be responsible for the cost and execution of additional security certification documentation and testing if such activities are required for government approval of connection to restricted networks. | | |

## SOV Consolidated Non-Functional Requirements
## Traceability Matrix (RTM)
### NIST 800 Series

| Base | Level | Sub | Req ID New | Focus | Specifics | Requirement Description | Notes | Evidence |
|---|---|---|---|---|---|---|---|---|
| AC | 00 | | AC-00 | Access Control | Access Control Group | Hosting Provider can meet all Access Control measures in the Access Control Group | | |
| AC | 01 | | AC-01 | Access Control | AC-01 | Access Control Policy and Procedures | | |
| AC | 02 | | AC-02 | Access Control | AC-02 | Account Management | | |
| AC | 03 | | AC-03 | Access Control | AC-03 | Access Enforcement | | |
| AC | 04 | | AC-04 | Access Control | AC-04 | Information Flow Enforcement | | |
| AC | 05 | | AC-05 | Access Control | AC-05 | Separation of Duties | | |
| AC | 06 | | AC-06 | Access Control | AC-06 | Least Privilege | | |
| AC | 07 | | AC-07 | Access Control | AC-07 | Unsuccessful Login Attempts | | |
| AC | 08 | | AC-08 | Access Control | AC-08 | System Use Notification | | |
| AC | 09 | | AC-09 | Access Control | AC-09 | Previous Logon (Access) Notification | | |
| AC | 10 | | AC-10 | Access Control | AC-10 | Concurrent Session Control | | |
| AC | 11 | | AC-11 | Access Control | AC-11 | Session Lock | | |
| AC | 12 | | AC-12 | Access Control | AC-12 | Session Termination (Withdrawn) | | |
| AC | 13 | | AC-13 | Access Control | AC-13 | Supervision and Review—Access Control (Withdrawn) | | |
| AC | 14 | | AC-14 | Access Control | AC-14 | Permitted Actions without Identification or Authentication | | |
| AC | 15 | | AC-15 | Access Control | AC-15 | Automated Marking (Withdrawn) | | |
| AC | 16 | | AC-16 | Access Control | AC-16 | Security Attributes | | |
| AC | 17 | | AC-17 | Access Control | AC-17 | Remote Access | | |
| AC | 18 | | AC-18 | Access Control | AC-18 | Wireless Access | | |
| AC | 19 | | AC-19 | Access Control | AC-19 | Access Control for Mobile Devices | | |
| AC | 20 | | AC-20 | Access Control | AC-20 | Use of External Information Systems | | |
| AC | 21 | | AC-21 | Access Control | AC-21 | User-Based Collaboration and Information Sharing | | |
| AC | 22 | | AC-22 | Access Control | AC-22 | Publicly Accessible Content | | |
| AT | 00 | | AT-00 | Awareness and Training | Awareness and Training Control Group | Hosting Provider can meet all Awareness and Training measures in the Awareness and Training Control Group | | |
| AT | 01 | | AT-01 | Awareness and Training | AT-01 | Security Awareness and Training Policy and Procedures | | |
| AT | 02 | | AT-02 | Awareness and Training | AT-02 | Security Awareness | | |
| AT | 03 | | AT-03 | Awareness and Training | AT-03 | Security Training | | |
| AT | 04 | | AT-04 | Awareness and Training | AT-04 | Security Training Records | | |
| AT | 05 | | AT-05 | Awareness and Training | AT-05 | Contacts with Security Groups and Associations | | |
| AU | 00 | | AU-00 | Audit and Accountability | Audit and Accountability Control Group | Hosting Provider can meet all Audit and Accountability measures in the Audit and Accountability Control Group | | |
| AU | 01 | | AU-01 | Audit and Accountability | AU-01 | Audit and Accountability Policy and Procedures | | |
| AU | 02 | | AU-02 | Audit and Accountability | AU-02 | Auditable Events | | |
| AU | 03 | | AU-03 | Audit and Accountability | AU-03 | Content of Audit Records | | |
| AU | 04 | | AU-04 | Audit and Accountability | AU-04 | Audit Storage Capacity | | |
| AU | 05 | | AU-05 | Audit and Accountability | AU-05 | Response to Audit Processing Failures | | |
| AU | 06 | | AU-06 | Audit and Accountability | AU-06 | Audit Review, Analysis, and Reporting | | |
| AU | 07 | | AU-07 | Audit and Accountability | AU-07 | Audit Reduction and Report Generation | | |
| AU | 08 | | AU-08 | Audit and Accountability | AU-08 | Time Stamps | | |
| AU | 09 | | AU-09 | Audit and Accountability | AU-09 | Protection of Audit Information | | |
| AU | 10 | | AU-10 | Audit and Accountability | AU-10 | Non-repudiation | | |
| AU | 11 | | AU-11 | Audit and Accountability | AU-11 | Audit Record Retention | | |
| AU | 12 | | AU-12 | Audit and Accountability | AU-12 | Audit Generation | | |
| AU | 13 | | AU-13 | Audit and Accountability | AU-13 | Monitoring for Information Disclosure | | |
| AU | 14 | | AU-14 | Audit and Accountability | AU-14 | Session Audit | | |
| CA | 00 | | CA-00 | Security Assessment and Authorization | Security Assessment and Authorization Control Group | Hosting Provider can meet all Security Assessment and Authorization measures in the Security Assessment and Authorization Control Group | | |
| CA | 01 | | CA-01 | Security Assessment and Authorization | CA-01 | Security Assessment and Authorization Policies and Procedures | | |
| CA | 02 | | CA-02 | Security Assessment and Authorization | CA-02 | Security Assessments | | |
| CA | 03 | | CA-03 | Security Assessment and Authorization | CA-03 | Information System Connections | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| CA | 04 | | CA-04 | Security Assessment and Authorization | CA-04 | Security Certification (Withdrawn) | | |
| CA | 05 | | CA-05 | Security Assessment and Authorization | CA-05 | Plan of Action and Milestones | | |
| CA | 06 | | CA-06 | Security Assessment and Authorization | CA-06 | Security Authorization | | |
| CA | 07 | | CA-07 | Security Assessment and Authorization | CA-07 | Continuous Monitoring | | |
| CM | 00 | | CM-00 | Configuration Management | Configuration Management Control Group | Hosting Provider can meet all Configuration Management measures in the Configuration Management Control Group | | |
| CM | 01 | | CM-01 | Configuration Management | CM-01 | Configuration Management Policy and Procedures | | |
| CM | 02 | | CM-02 | Configuration Management | CM-02 | Baseline Configuration | | |
| CM | 03 | | CM-03 | Configuration Management | CM-03 | Configuration Change Control | | |
| CM | 04 | | CM-04 | Configuration Management | CM-04 | Security Impact Analysis | | |
| CM | 05 | | CM-05 | Configuration Management | CM-05 | Access Restrictions for Change | | |
| CM | 06 | | CM-06 | Configuration Management | CM-06 | Configuration Settings | | |
| CM | 07 | | CM-07 | Configuration Management | CM-07 | Least Functionality | | |
| CM | 08 | | CM-08 | Configuration Management | CM-08 | Information System Component Inventory | | |
| CM | 09 | | CM-09 | Configuration Management | CM-09 | Configuration Management Plan | | |
| CP | 00 | | CP-00 | Contingency Planning | Contingency Planning Control Group | Hosting Provider can meet all Contingency Planning measures in the Contingency Planning Control Group | | |
| CP | 01 | | CP-01 | Contingency Planning | CP-01 | Contingency Planning Policy and Procedures | | |
| CP | 02 | | CP-02 | Contingency Planning | CP-02 | Contingency Plan | | |
| CP | 03 | | CP-03 | Contingency Planning | CP-03 | Contingency Training | | |
| CP | 04 | | CP-04 | Contingency Planning | CP-04 | Contingency Plan Testing and Exercises | | |
| CP | 05 | | CP-05 | Contingency Planning | CP-05 | Contingency Plan Update (Withdrawn) | | |
| CP | 06 | | CP-06 | Contingency Planning | CP-06 | Alternate Storage Site | | |
| CP | 07 | | CP-07 | Contingency Planning | CP-07 | Alternate Processing Site | | |
| CP | 08 | | CP-08 | Contingency Planning | CP-08 | Telecommunications Services | | |
| CP | 09 | | CP-09 | Contingency Planning | CP-09 | Information System Backup | | |
| CP | 10 | | CP-10 | Contingency Planning | CP-10 | Information System Recovery and Reconstitution | | |
| IA | 00 | | IA-00 | Identification and Authentication | Identification and Authentication Control Group | Hosting Provider can meet all Identification and Authentication measures in the Identification and Authentication Control Group | | |
| IA | 01 | | IA-01 | Identification and Authentication | IA-01 | Identification and Authentication Policy and Procedures | | |
| IA | 02 | | IA-02 | Identification and Authentication | IA-02 | Identification and Authentication (Organizational Users) | | |
| IA | 03 | | IA-03 | Identification and Authentication | IA-03 | Device Identification and Authentication | | |
| IA | 04 | | IA-04 | Identification and Authentication | IA-04 | Identifier Management | | |
| IA | 05 | | IA-05 | Identification and Authentication | IA-05 | Authenticator Management | | |
| IA | 06 | | IA-06 | Identification and Authentication | IA-06 | Authenticator Feedback | | |
| IA | 07 | | IA-07 | Identification and Authentication | IA-07 | Cryptographic Module Authentication | | |
| IA | 08 | | IA-08 | Identification and Authentication | IA-08 | Identification and Authentication (Non-Organizational Users) | | |
| IR | 00 | | IR-00 | Incident Response | Incident Response Control Group | Hosting Provider can meet all Incident Response measures in the Incident Response Control Group | | |
| IR | 01 | | IR-01 | Incident Response | IR-01 | Incident Response Policy and Procedures | | |
| IR | 02 | | IR-02 | Incident Response | IR-02 | Incident Response Training | | |
| IR | 03 | | IR-03 | Incident Response | IR-03 | Incident Response Testing and Exercises | | |
| IR | 04 | | IR-04 | Incident Response | IR-04 | Incident Handling | | |
| IR | 05 | | IR-05 | Incident Response | IR-05 | Incident Monitoring | | |
| IR | 06 | | IR-06 | Incident Response | IR-06 | Incident Reporting | | |
| IR | 07 | | IR-07 | Incident Response | IR-07 | Incident Response Assistance | | |
| IR | 08 | | IR-08 | Incident Response | IR-08 | Incident Response Plan | | |

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|---|---|---|---|---|---|---|---|---|
| MA | 00 | | MA-00 | Maintenance | Maintenance Control Group | Hosting Provider can meet all Maintenance measures in the Maintenance Control Group | | |
| MA | 01 | | MA-01 | Maintenance | MA-01 | System Maintenance Policy and Procedures | | |
| MA | 02 | | MA-02 | Maintenance | MA-02 | Controlled Maintenance | | |
| MA | 03 | | MA-03 | Maintenance | MA-03 | Maintenance Tools | | |
| MA | 04 | | MA-04 | Maintenance | MA-04 | Non-Local Maintenance | | |
| MA | 05 | | MA-05 | Maintenance | MA-05 | Maintenance Personnel | | |
| MA | 06 | | MA-06 | Maintenance | MA-06 | Timely Maintenance | | |
| MP | 00 | | MP-00 | Media Protection | Media Protection Control Group | Hosting Provider can meet all Media Protection measures in the Media Protection Control Group | | |
| MP | 01 | | MP-01 | Media Protection | MP-01 | Media Protection Policy and Procedures | | |
| MP | 02 | | MP-02 | Media Protection | MP-02 | Media Access | | |
| MP | 03 | | MP-03 | Media Protection | MP-03 | Media Marking | | |
| MP | 04 | | MP-04 | Media Protection | MP-04 | Media Storage | | |
| MP | 05 | | MP-05 | Media Protection | MP-05 | Media Transport | | |
| MP | 06 | | MP-06 | Media Protection | MP-06 | Media Sanitization | | |
| PE | 00 | | PE-00 | Physical and Environmental Protection | Physical and Environmental Protection Control Group | Hosting Provider can meet all Physical and Environmental Protection measures in the Physical and Environmental Protection Control Group | | |
| PE | 01 | | PE-01 | Physical and Environmental Protection | PE-01 | Physical and Environmental Protection Policy and Procedures | | |
| PE | 02 | | PE-02 | Physical and Environmental Protection | PE-02 | Physical Access Authorizations | | |
| PE | 03 | | PE-03 | Physical and Environmental Protection | PE-03 | Physical Access Control | | |
| PE | 04 | | PE-04 | Physical and Environmental Protection | PE-04 | Access Control for Transmission Medium | | |
| PE | 05 | | PE-05 | Physical and Environmental Protection | PE-05 | Access Control for Output Devices | | |
| PE | 06 | | PE-06 | Physical and Environmental Protection | PE-06 | Monitoring Physical Access | | |
| PE | 07 | | PE-07 | Physical and Environmental Protection | PE-07 | Visitor Control | | |
| PE | 08 | | PE-08 | Physical and Environmental Protection | PE-08 | Access Records | | |
| PE | 09 | | PE-09 | Physical and Environmental Protection | PE-09 | Power Equipment and Power Cabling | | |
| PE | 10 | | PE-10 | Physical and Environmental Protection | PE-10 | Emergency Shutoff | | |
| PE | 11 | | PE-11 | Physical and Environmental Protection | PE-11 | Emergency Power | | |
| PE | 12 | | PE-12 | Physical and Environmental Protection | PE-12 | Emergency Lighting | | |
| PE | 13 | | PE-13 | Physical and Environmental Protection | PE-13 | Fire Protection | | |
| PE | 14 | | PE-14 | Physical and Environmental Protection | PE-14 | Temperature and Humidity Controls | | |
| PE | 15 | | PE-15 | Physical and Environmental Protection | PE-15 | Water Damage Protection | | |
| PE | 16 | | PE-16 | Physical and Environmental Protection | PE-16 | Delivery and Removal | | |
| PE | 17 | | PE-17 | Physical and Environmental Protection | PE-17 | Alternate Work Site | | |
| PE | 18 | | PE-18 | Physical and Environmental Protection | PE-18 | Location of Information System Components | | |
| PE | 19 | | PE-19 | Physical and Environmental Protection | PE-19 | Information Leakage | | |
| PL | 00 | | PL-00 | Planning | Planning Control Group | Hosting Provider can meet all Planning measures in the Planning Control Group | | |
| PL | 01 | | PL-01 | Planning | PL-01 | Security Planning Policy and Procedures | | |
| PL | 02 | | PL-02 | Planning | PL-02 | System Security Plan | | |
| PL | 03 | | PL-03 | Planning | PL-03 | System Security Plan Update (Withdrawn) | | |
| PL | 04 | | PL-04 | Planning | PL-04 | Rules of Behavior | | |

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|---|---|---|---|---|---|---|---|---|
| PL | 05 | | PL-05 | Planning | PL-05 | Privacy Impact Assessment | | |
| PL | 06 | | PL-06 | Planning | PL-06 | Security-Related Activity Planning | | |
| PS | 00 | | PS-00 | Personnel Security | Personnel Security Control Group | Hosting Provider can meet all Personnel Security measures in the Personnel Security Control Group | | |
| PS | 01 | | PS-01 | Personnel Security | PS-01 | Personnel Security Policy and Procedures | | |
| PS | 02 | | PS-02 | Personnel Security | PS-02 | Position Categorization | | |
| PS | 03 | | PS-03 | Personnel Security | PS-03 | Personnel Screening | | |
| PS | 04 | | PS-04 | Personnel Security | PS-04 | Personnel Termination | | |
| PS | 05 | | PS-05 | Personnel Security | PS-05 | Personnel Transfer | | |
| PS | 06 | | PS-06 | Personnel Security | PS-06 | Access Agreements | | |
| PS | 07 | | PS-07 | Personnel Security | PS-07 | Third-Party Personnel Security | | |
| PS | 08 | | PS-08 | Personnel Security | PS-08 | Personnel Sanctions | | |
| RA | 00 | | RA-00 | Risk Assessment | Risk Assessment Control Group | Hosting Provider can meet all Risk Assessment measures in the Risk Assessment Control Group | | |
| RA | 01 | | RA-01 | Risk Assessment | RA-01 | Risk Assessment Policy and Procedures | | |
| RA | 02 | | RA-02 | Risk Assessment | RA-02 | Security Categorization | | |
| RA | 03 | | RA-03 | Risk Assessment | RA-03 | Risk Assessment | | |
| RA | 04 | | RA-04 | Risk Assessment | RA-04 | Risk Assessment Update (Withdrawn) | | |
| RA | 05 | | RA-05 | Risk Assessment | RA-05 | Vulnerability Scanning | | |
| SA | 00 | | SA-00 | System and Services Acquisition | System and Services Acquisition Control Group | Hosting Provider can meet all System and Services Acquisition measures in the System and Services Acquisition Control Group | | |
| SA | 01 | | SA-01 | System and Services Acquisition | SA-01 | System and Services Acquisition Policy and Procedures | | |
| SA | 02 | | SA-02 | System and Services Acquisition | SA-02 | Allocation of Resources | | |
| SA | 03 | | SA-03 | System and Services Acquisition | SA-03 | Life Cycle Support | | |
| SA | 04 | | SA-04 | System and Services Acquisition | SA-04 | Acquisitions | | |
| SA | 05 | | SA-05 | System and Services Acquisition | SA-05 | Information System Documentation | | |
| SA | 06 | | SA-06 | System and Services Acquisition | SA-06 | Software Usage Restrictions | | |
| SA | 07 | | SA-07 | System and Services Acquisition | SA-07 | User-Installed Software | | |
| SA | 08 | | SA-08 | System and Services Acquisition | SA-08 | Security Engineering Principles | | |
| SA | 09 | | SA-09 | System and Services Acquisition | SA-09 | External Information System Services | | |
| SA | 10 | | SA-10 | System and Services Acquisition | SA-10 | Developer Configuration Management | | |
| SA | 11 | | SA-11 | System and Services Acquisition | SA-11 | Developer Security Testing | | |
| SA | 12 | | SA-12 | System and Services Acquisition | SA-12 | Supply Chain Protection | | |
| SA | 13 | | SA-13 | System and Services Acquisition | SA-13 | Trustworthiness | | |
| SA | 14 | | SA-14 | System and Services Acquisition | SA-14 | Critical Information System Components | | |
| SC | 00 | | SC-00 | System and Communications Protection | System and Communications Protection Control Group | Hosting Provider can meet all System and Communications Protection measures in the System and Communications Protection Control Group | | |
| SC | 01 | | SC-01 | System and Communications Protection | SC-01 | System and Communications Protection Policy and Procedures | | |
| SC | 02 | | SC-02 | System and Communications Protection | SC-02 | Application Partitioning | | |
| SC | 03 | | SC-03 | System and Communications Protection | SC-03 | Security Function Isolation | | |
| SC | 04 | | SC-04 | System and Communications Protection | SC-04 | Information in Shared Resources | | |
| SC | 05 | | SC-05 | System and Communications Protection | SC-05 | Denial of Service Protection | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| SC | 06 | | SC-06 | System and Communications Protection | SC-06 | Resource Priority | | |
| SC | 07 | | SC-07 | System and Communications Protection | SC-07 | Boundary Protection | | |
| SC | 08 | | SC-08 | System and Communications Protection | SC-08 | Transmission Integrity | | |
| SC | 09 | | SC-09 | System and Communications Protection | SC-09 | Transmission Confidentiality | | |
| SC | 10 | | SC-10 | System and Communications Protection | SC-10 | Network Disconnect | | |
| SC | 11 | | SC-11 | System and Communications Protection | SC-11 | Trusted Path | | |
| SC | 12 | | SC-12 | System and Communications Protection | SC-12 | Cryptographic Key Establishment and Management | | |
| SC | 13 | | SC-13 | System and Communications Protection | SC-13 | Use of Cryptography | | |
| SC | 14 | | SC-14 | System and Communications Protection | SC-14 | Public Access Protections | | |
| SC | 15 | | SC-15 | System and Communications Protection | SC-15 | Collaborative Computing Devices | | |
| SC | 16 | | SC-16 | System and Communications Protection | SC-16 | Transmission of Security Attributes | | |
| SC | 17 | | SC-17 | System and Communications Protection | SC-17 | Public Key Infrastructure Certificates | | |
| SC | 18 | | SC-18 | System and Communications Protection | SC-18 | Mobile Code | | |
| SC | 19 | | SC-19 | System and Communications Protection | SC-19 | Voice Over Internet Protocol | | |
| SC | 20 | | SC-20 | System and Communications Protection | SC-20 | Secure Name /Address Resolution Service (Authoritative Source) | | |
| SC | 21 | | SC-21 | System and Communications Protection | SC-21 | Secure Name /Address Resolution Service (Recursive or Caching Resolver) | | |
| SC | 22 | | SC-22 | System and Communications Protection | SC-22 | Architecture and Provisioning for Name/Address Resolution Service | | |
| SC | 23 | | SC-23 | System and Communications Protection | SC-23 | Session Authenticity | | |
| SC | 24 | | SC-24 | System and Communications Protection | SC-24 | Fail in Known State | | |
| SC | 25 | | SC-25 | System and Communications Protection | SC-25 | Thin Nodes | | |
| SC | 26 | | SC-26 | System and Communications Protection | SC-26 | Honeypots | | |
| SC | 27 | | SC-27 | System and Communications Protection | SC-27 | Operating System-Independent Applications | | |
| SC | 28 | | SC-28 | System and Communications Protection | SC-28 | Protection of Information at Rest | | |
| SC | 29 | | SC-29 | System and Communications Protection | SC-29 | Heterogeneity | | |
| SC | 30 | | SC-30 | System and Communications Protection | SC-30 | Virtualization Techniques | | |
| SC | 31 | | SC-31 | System and Communications Protection | SC-31 | Covert Channel Analysis | | |
| SC | 32 | | SC-32 | System and Communications Protection | SC-32 | Information System Partitioning | | |
| SC | 33 | | SC-33 | System and Communications Protection | SC-33 | Transmission Preparation Integrity | | |
| SC | 34 | | SC-34 | System and Communications Protection | SC-34 | Non-Modifiable Executable Programs | | |
| SI | 00 | | SI-00 | System and Information Integrity | System and Information Integrity Control Group | Hosting Provider can meet all System and Information Integrity measures in the System and Information Integrity Control Group | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| SI | 01 | | SI-01 | System and Information Integrity | SI-01 | System and Information Integrity Policy and Procedures | | |
| SI | 02 | | SI-02 | System and Information Integrity | SI-02 | Flaw Remediation | | |
| SI | 03 | | SI-03 | System and Information Integrity | SI-03 | Malicious Code Protection | | |
| SI | 04 | | SI-04 | System and Information Integrity | SI-04 | Information System Monitoring | | |
| SI | 05 | | SI-05 | System and Information Integrity | SI-05 | Security Alerts, Advisories, and Directives | | |
| SI | 06 | | SI-06 | System and Information Integrity | SI-06 | Security Functionality Verification | | |
| SI | 07 | | SI-07 | System and Information Integrity | SI-07 | Software and Information Integrity | | |
| SI | 08 | | SI-08 | System and Information Integrity | SI-08 | Spam Protection | | |
| SI | 09 | | SI-09 | System and Information Integrity | SI-09 | Information Input Restrictions | | |
| SI | 10 | | SI-10 | System and Information Integrity | SI-10 | Information Input Validation | | |
| SI | 11 | | SI-11 | System and Information Integrity | SI-11 | Error Handling | | |
| SI | 12 | | SI-12 | System and Information Integrity | SI-12 | Information Output Handling and Retention | | |
| SI | 13 | | SI-13 | System and Information Integrity | SI-13 | Predictable Failure Prevention | | |
| PM | 00 | | PM-00 | Program Management | Program Management Control Group | Hosting Provider can meet all Program Management measures in the Program Management Control Group | | |
| PM | 01 | | PM-01 | Program Management | PM-01 | Information Security Program Plan | | |
| PM | 02 | | PM-02 | Program Management | PM-02 | Senior Information Security Officer | | |
| PM | 03 | | PM-03 | Program Management | PM-03 | Information Security Resources | | |
| PM | 04 | | PM-04 | Program Management | PM-04 | Plan of Action and Milestones Process | | |
| PM | 05 | | PM-05 | Program Management | PM-05 | Information System Inventory | | |
| PM | 06 | | PM-06 | Program Management | PM-06 | Information Security Measures of Performance | | |
| PM | 07 | | PM-07 | Program Management | PM-07 | Enterprise Architecture | | |
| PM | 08 | | PM-08 | Program Management | PM-08 | Critical Infrastructure Plan | | |
| PM | 09 | | PM-09 | Program Management | PM-09 | Risk Management Strategy | | |
| PM | 10 | | PM-10 | Program Management | PM-10 | Security Authorization Process | | |
| PM | 11 | | PM-11 | Program Management | PM-11 | Mission/Business Process Definition | | |

SOV Consolidated Non-Functional Requirements Traceability Matrix (RTM)

NIST 800 Series

| Base | Level | Sub | Req ID New | Focus | Specifics | Requirement Description | Notes | Evidence |
|---|---|---|---|---|---|---|---|---|
| AC | | | AC-01.01-00 | AC-01 ACCESS CONTROL POLICY AND PROCEDURES | AC-01.01-00 | See Exhibit F | | |
| | | | AC-01.01-01 | AC-01 ACCESS CONTROL POLICY AND PROCEDURES | AC-01.01-01 | See Exhibit F | | |
| | | | AC-01.01-02 | AC-01 ACCESS CONTROL POLICY AND PROCEDURES | AC-01.01-02 | See Exhibit F | | |
| | | | | AC-01 ACCESS CONTROL POLICY AND PROCEDURES | Supplemental Guidance | See Exhibit F | | |
| | | | AC-02.01-00 | AC-02 ACCOUNT MANAGEMENT | AC-02.01-00 | See Exhibit F | | |
| | | | AC-02.01-01 | AC-02 ACCOUNT MANAGEMENT | AC-02.01-01 | See Exhibit F | | |
| | | | AC-02.01-02 | AC-02 ACCOUNT MANAGEMENT | AC-02.01-02 | See Exhibit F | | |
| | | | AC-02.01-03 | AC-02 ACCOUNT MANAGEMENT | AC-02.01-03 | See Exhibit F | | |
| | | | AC-02.01-04 | AC-02 ACCOUNT MANAGEMENT | AC-02.01-04 | See Exhibit F | | |
| | | | AC-02.01-05 | AC-02 ACCOUNT MANAGEMENT | AC-02.01-05 | See Exhibit F | | |
| | | | AC-02.01-06 | AC-02 ACCOUNT MANAGEMENT | AC-02.01-06 | See Exhibit F | | |
| | | | AC-02.01-07 | AC-02 ACCOUNT MANAGEMENT | AC-02.01-07 | See Exhibit F | | |
| | | | AC-02.01-08 | AC-02 ACCOUNT MANAGEMENT | AC-02.01-08 | See Exhibit F | | |
| | | | AC-02.01-09 | AC-02 ACCOUNT MANAGEMENT | AC-02.01-09 | See Exhibit F | | |
| | | | AC-02.01-10 | AC-02 ACCOUNT MANAGEMENT | AC-02.01-10 | See Exhibit F | | |
| | | | | AC-02 ACCOUNT MANAGEMENT | Supplemental Guidance | See Exhibit F | | |
| | | | AC-02(1).01-00 | AC-02 CONTROL ENHANCEMENTS | AC-02(1).01-00 | See Exhibit F | | |
| | | | AC-02(2).01-00 | AC-02 CONTROL ENHANCEMENTS | AC-02(2).01-00 | See Exhibit F | | |
| | | | AC-02(3).01-00 | AC-02 CONTROL ENHANCEMENTS | AC-02(3).01-00 | See Exhibit F | | |
| | | | AC-02(4).01-00 | AC-02 CONTROL ENHANCEMENTS | AC-02(4).01-00 | See Exhibit F | | |
| | | | AC-02(5).01-00 | AC-02 CONTROL ENHANCEMENTS | AC-02(5).01-00 | See Exhibit F | | |
| | | | AC-02(5).01-01 | AC-02 CONTROL ENHANCEMENTS | AC-02(5).01-01 | See Exhibit F | | |
| | | | AC-02(5).01-02 | AC-02 CONTROL ENHANCEMENTS | AC-02(5).01-02 | See Exhibit F | | |
| | | | AC-02(5).01-03 | AC-02 CONTROL ENHANCEMENTS | AC-02(5).01-03 | See Exhibit F | | |
| | | | AC-02(5).01-04 | AC-02 CONTROL ENHANCEMENTS | AC-02(5).01-04 | See Exhibit F | | |
| | | | AC-02(6).01-00 | AC-02 CONTROL ENHANCEMENTS | AC-02(6).01-00 | See Exhibit F | | |
| | | | | AC-02 CONTROL ENHANCEMENTS | Enhanced Supplemental | See Exhibit F | | |
| | | | AC-02(7).01-00 | AC-02 CONTROL ENHANCEMENTS | AC-02(7).01-00 | See Exhibit F | | |
| | | | AC-02(7).01-01 | AC-02 CONTROL ENHANCEMENTS | AC-02(7).01-01 | See Exhibit F | | |
| | | | AC-02(7).01-02 | AC-02 CONTROL ENHANCEMENTS | AC-02(7).01-02 | See Exhibit F | | |
| | | | AC-03.01-00 | AC-03 ACCESS ENFORCEMENT | AC-03.01-00 | See Exhibit F | | |

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|---|---|---|---|---|---|---|---|---|
| | | | | AC-03 CONTROL ENHANCEMENTS | Supplemental Guidance | See Exhibit F | | |
| | | | AC-03(1).01-00 | AC-03 CONTROL ENHANCEMENTS | AC-03(1).01-00 | See Exhibit F | | |
| | | | AC-03(2).01-00 | AC-03 CONTROL ENHANCEMENTS | AC-03(2).01-00 | See Exhibit F | | |
| | | | | AC-03 CONTROL ENHANCEMENTS | Enhanced Supplemental | See Exhibit F | | |
| | | | AC-03(3).01-00 | AC-03 CONTROL ENHANCEMENTS | AC-03(3).01-00 | See Exhibit F | | |
| | | | AC-03(3).01-01 | AC-03 CONTROL ENHANCEMENTS | AC-03(3).01-01 | See Exhibit F | | |
| | | | AC-03(3).01-02 | AC-03 CONTROL ENHANCEMENTS | AC-03(3).01-02 | See Exhibit F | | |
| | | | | AC-03 CONTROL ENHANCEMENTS | Enhanced Supplemental | See Exhibit F | | |
| | | | | AC-03 CONTROL ENHANCEMENTS | Enhanced Supplemental | See Exhibit F | | |
| | | | AC-03(4).01-00 | AC-03 CONTROL ENHANCEMENTS | AC-03(4).01-00 | See Exhibit F | | |
| | | | AC-03(4).01-01 | AC-03 CONTROL ENHANCEMENTS | AC-03(4).01-01 | See Exhibit F | | |
| | | | AC-03(4).01-02 | AC-03 CONTROL ENHANCEMENTS | AC-03(4).01-02 | See Exhibit F | | |
| | | | AC-03(4).01-03 | AC-03 CONTROL ENHANCEMENTS | AC-03(4).01-03 | See Exhibit F | | |
| | | | AC-03(5).01-00 | AC-03 CONTROL ENHANCEMENTS | AC-03(5).01-00 | See Exhibit F | | |
| | | | | AC-03 CONTROL ENHANCEMENTS | Enhanced Supplemental | See Exhibit F | | |
| | | | AC-03(6).01-00 | AC-03 CONTROL ENHANCEMENTS | AC-03(6).01-00 | See Exhibit F | | |
| | | | | AC-03 CONTROL ENHANCEMENTS | Enhanced Supplemental | See Exhibit F | | |
| | | | AC-04.01-00 | AC-4 INFORMATION FLOW ENFORCEMENT | AC-04.01-00 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | AC-04(1).01-00 | AC-04 CONTROL ENHANCEMENTS | AC-04(1).01-00 | See Exhibit F | | |
| | | | | AC-04 CONTROL ENHANCEMENTS | Enhanced Supplemental | See Exhibit F | | |
| | | | AC-04(2).01-00 | AC-04 CONTROL ENHANCEMENTS | AC-04(2).01-00 | See Exhibit F | | |
| | | | AC-04(3).01-00 | AC-04 CONTROL ENHANCEMENTS | AC-04(3).01-00 | See Exhibit F | | |
| | | | AC-04(4).01-00 | AC-04 CONTROL ENHANCEMENTS | AC-04(4).01-00 | See Exhibit F | | |
| | | | AC-04(5).01-00 | AC-04 CONTROL ENHANCEMENTS | AC-04(5).01-00 | See Exhibit F | | |
| | | | AC-04(6).01-00 | AC-04 CONTROL ENHANCEMENTS | AC-04(6).01-00 | See Exhibit F | | |
| | | | AC-04(7).01-00 | AC-04 CONTROL ENHANCEMENTS | AC-04(7).01-00 | See Exhibit F | | |
| | | | AC-04(8).01-00 | AC-04 CONTROL ENHANCEMENTS | AC-04(8).01-00 | See Exhibit F | | |
| | | | | AC-04 CONTROL ENHANCEMENTS | Enhanced Supplemental | See Exhibit F | | |
| | | | AC-04(9).01-00 | AC-04 CONTROL ENHANCEMENTS | AC-04(9).01-00 | See Exhibit F | | |
| | | | AC-04(10).01-00 | AC-04 CONTROL ENHANCEMENTS | AC-04(10).01-00 | See Exhibit F | | |
| | | | AC-04(11).01-00 | AC-04 CONTROL ENHANCEMENTS | AC-04(11).01-00 | See Exhibit F | | |
| | | | | AC-04 CONTROL ENHANCEMENTS | Enhanced Supplemental | See Exhibit F | | |
| | | | AC-04(12).01-00 | AC-04 CONTROL ENHANCEMENTS | AC-04(12).01-00 | See Exhibit F | | |

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|---|---|---|---|---|---|---|---|---|
| | | | | AC-04 CONTROL ENHANCEMENTS | Enhanced Supplemental | See Exhibit F | | |
| | | | AC-04(13).01-00 | AC-04 CONTROL ENHANCEMENTS | AC-04(13).01-00 | See Exhibit F | | |
| | | | | AC-04 CONTROL ENHANCEMENTS | Enhanced Supplemental | See Exhibit F | | |
| | | | AC-04(14).01-00 | AC-04 CONTROL ENHANCEMENTS | AC-04(14).01-00 | See Exhibit F | | |
| | | | | AC-04 CONTROL ENHANCEMENTS | Enhanced Supplemental | See Exhibit F | | |
| | | | AC-04(15).01-00 | AC-04 CONTROL ENHANCEMENTS | AC-04(15).01-00 | See Exhibit F | | |
| | | | | AC-04 CONTROL ENHANCEMENTS | Enhanced Supplemental | See Exhibit F | | |
| | | | AC-04(16).01-00 | Control Enhancements: | AC-04(16).01-00 | See Exhibit F | | |
| | | | | AC-04 CONTROL ENHANCEMENTS | Enhanced Supplemental | See Exhibit F | | |
| | | | AC-04(17).01-00 | AC-04 CONTROL ENHANCEMENTS | AC-04(17).01-00 | See Exhibit F | | |
| | | | AC-04(17).01-01 | AC-04 CONTROL ENHANCEMENTS | AC-04(17).01-01 | See Exhibit F | | |
| | | | AC-04(17).01-02 | AC-04 CONTROL ENHANCEMENTS | AC-04(17).01-02 | See Exhibit F | | |
| | | | AC-04(17).01-03 | AC-04 CONTROL ENHANCEMENTS | AC-04(17).01-03 | See Exhibit F | | |
| | | | | AC-04 CONTROL ENHANCEMENTS | Enhanced Supplemental | See Exhibit F | | |
| | | | AC-05.01-00 | AC-05 SEPARATION OF DUTIES | AC-05.01-00 | See Exhibit F | | |
| | | | AC-05.01-01 | AC-05 SEPARATION OF DUTIES | AC-05.01-01 | See Exhibit F | | |
| | | | AC-05.01-02 | AC-05 SEPARATION OF DUTIES | AC-05.01-02 | See Exhibit F | | |
| | | | AC-05.01-03 | AC-05 SEPARATION OF DUTIES | AC-05.01-03 | See Exhibit F | | |
| | | | | AC-05 SEPARATION OF DUTIES | Supplemental Guidance | See Exhibit F | | |
| | | | AC-06.01-00 | AC-06 LEAST PRIVILEGE | AC-06.01-00 | See Exhibit F | | |
| | | | | AC-06 LEAST PRIVILEGE | Supplemental Guidance | See Exhibit F | | |
| | | | AC-06(1).01-00 | AC-06 CONTROL ENHANCEMENTS | AC-06(1).01-00 | See Exhibit F | | |
| | | | | AC-06 CONTROL ENHANCEMENTS | Enhanced Supplemental | See Exhibit F | | |
| | | | AC-06(2).01-00 | AC-06 CONTROL ENHANCEMENTS | AC-06(2).01-00 | See Exhibit F | | |
| | | | | AC-06 CONTROL ENHANCEMENTS | Enhanced Supplemental | See Exhibit F | | |
| | | | AC-06(3).01-00 | AC-06 CONTROL ENHANCEMENTS | AC-06(3).01-00 | See Exhibit F | | |
| | | | AC-06(4).01-00 | AC-06 CONTROL ENHANCEMENTS | AC-06(4).01-00 | See Exhibit F | | |
| | | | | AC-06 CONTROL ENHANCEMENTS | Enhanced Supplemental | See Exhibit F | | |
| | | | AC-06(5).01-00 | AC-06 CONTROL ENHANCEMENTS | AC-06(5).01-00 | See Exhibit F | | |
| | | | | AC-06 CONTROL ENHANCEMENTS | Enhanced Supplemental | See Exhibit F | | |
| | | | AC-06(6).01-00 | AC-06 CONTROL ENHANCEMENTS | AC-06(6).01-00 | See Exhibit F | | |
| | | | | AC-06 CONTROL ENHANCEMENTS | Enhanced Supplemental | See Exhibit F | | |
| | | | AC-07.01-00 | AC-07 UNSUCCESSFUL LOGIN ATTEMPTS | AC-07.01-00 | See Exhibit F | | |
| | | | AC-07.01-01 | AC-07 UNSUCCESSFUL LOGIN ATTEMPTS | AC-07.01-01 | See Exhibit F | | |

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|---|---|---|---|---|---|---|---|---|
| | | | AC-07.01-02 | AC-07 UNSUCCESSFUL LOGIN ATTEMPTS | AC-07.01-02 | See Exhibit F | | |
| | | | | AC-07 UNSUCCESSFUL LOGIN ATTEMPTS | Supplemental Guidance | See Exhibit F | | |
| | | | AC-07(1).01-00 | AC-07 CONTROL ENHANCEMENTS | AC-07(1).01-00 | See Exhibit F | | |
| | | | AC-07(2).01-00 | AC-07 CONTROL ENHANCEMENTS | AC-07(2).01-00 | See Exhibit F | | |
| | | | | AC-07 CONTROL ENHANCEMENTS | Enhanced Supplemental | See Exhibit F | | |
| | | | AC-08.01-00 | AC-08 SYSTEM USE NOTIFICATION | AC-08.01-00 | See Exhibit F | | |
| | | | AC-08.01-01 | AC-08 SYSTEM USE NOTIFICATION | AC-08.01-01 | See Exhibit F | | |
| | | | AC-08.01-02 | AC-08 SYSTEM USE NOTIFICATION | AC-08.01-02 | See Exhibit F | | |
| | | | AC-08.01-03 | AC-08 SYSTEM USE NOTIFICATION | AC-08.01-03 | See Exhibit F | | |
| | | | | AC-08 SYSTEM USE NOTIFICATION | Supplemental Guidance | See Exhibit F | | |
| | | | AC-09.01-00 | AC-09 PREVIOUS LOGON (ACCESS) NOTIFICATION | AC-09.01-00 | See Exhibit F | | |
| | | | | AC-09 PREVIOUS LOGON (ACCESS) NOTIFICATION | Supplemental Guidance | See Exhibit F | | |
| | | | AC-09(1).01-00 | AC-09 PREVIOUS LOGON (ACCESS) NOTIFICATION | AC-09(1).01-00 | See Exhibit F | | |
| | | | AC-09(2).01-00 | AC-09 PREVIOUS LOGON (ACCESS) NOTIFICATION | AC-09(2).01-00 | See Exhibit F | | |
| | | | AC-09(3).01-00 | AC-09 PREVIOUS LOGON (ACCESS) NOTIFICATION | AC-09(3).01-00 | See Exhibit F | | |
| | | | AC-10.01-00 | AC-10 CONCURRENT SESSION CONTROL | AC-10.01-00 | See Exhibit F | | |
| | | | | AC-10 CONCURRENT SESSION CONTROL | Supplemental Guidance | See Exhibit F | | |
| | | | AC-11.01-00 | AC-11 SESSION LOCK | AC-11.01-00 | See Exhibit F | | |
| | | | AC-11.01-01 | AC-11 SESSION LOCK | AC-11.01-01 | See Exhibit F | | |
| | | | AC-11.01-02 | AC-11 SESSION LOCK | AC-11.01-02 | See Exhibit F | | |
| | | | | AC-11 SESSION LOCK | Supplemental Guidance | See Exhibit F | | |
| | | | AC-11(1).01-00 | AC-11 CONTROL ENHANCEMENTS | AC-11(1).01-00 | See Exhibit F | | |
| | | | AC-12.01-00 | AC-12 SESSION TERMINATION | AC-12.01-00 | See Exhibit F | | |
| | | | AC-13.01-00 | AC-13 SUPERVISION AND REVIEW — ACCESS CONTROL | AC-13.01-00 | See Exhibit F | | |
| | | | AC-14.01-00 | AC-14 PERMITTED ACTIONS WITHOUT IDENTIFICATION OR | AC-14.01-00 | See Exhibit F | | |
| | | | AC-14.01-01 | AC-14 PERMITTED ACTIONS WITHOUT IDENTIFICATION OR | AC-14.01-01 | See Exhibit F | | |
| | | | AC-14.01-02 | AC-14 PERMITTED ACTIONS WITHOUT IDENTIFICATION OR | AC-14.01-02 | See Exhibit F | | |
| | | | | AC-14 PERMITTED ACTIONS WITHOUT IDENTIFICATION OR | Supplemental Guidance | See Exhibit F | | |
| | | | AC-14(1).01-00 | AC-14 CONTROL ENHANCEMENTS | AC-14(1).01-00 | See Exhibit F | | |
| | | | AC-15.01-00 | AC-15 AUTOMATED MARKING | AC-15.01-00 | See Exhibit F | | |
| | | | AC-16.01-00 | AC-16 SECURITY ATTRIBUTES | AC-16.01-00 | See Exhibit F | | |
| | | | | AC-16 SECURITY ATTRIBUTES | Supplemental Guidance | See Exhibit F | | |
| | | | AC-16(1).01-00 | AC-16 CONTROL ENHANCEMENTS | AC-16(1).01-00 | See Exhibit F | | |
| | | | AC-16(2).01-00 | AC-16 CONTROL ENHANCEMENTS | AC-16(2).01-00 | See Exhibit F | | |

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|---|---|---|---|---|---|---|---|---|
| | | | AC-16(3).01-00 | AC-16 CONTROL ENHANCEMENTS | AC-16(3).01-00 | See Exhibit F | | |
| | | | | AC-16 CONTROL ENHANCEMENTS | Enhanced Supplemental | See Exhibit F | | |
| | | | AC-16(4).01-00 | AC-16 CONTROL ENHANCEMENTS | AC-16(4).01-00 | See Exhibit F | | |
| | | | | AC-16 CONTROL ENHANCEMENTS | Enhanced Supplemental | See Exhibit F | | |
| | | | AC-16(5).01-00 | AC-16 CONTROL ENHANCEMENTS | AC-16(5).01-00 | See Exhibit F | | |
| | | | | AC-16 CONTROL ENHANCEMENTS | Enhanced Supplemental | See Exhibit F | | |
| | | | AC-17.01-00 | AC-17 REMOTE ACCESS | AC-17.01-00 | See Exhibit F | | |
| | | | AC-17.01-01 | AC-17 REMOTE ACCESS | AC-17.01-01 | See Exhibit F | | |
| | | | AC-17.01-02 | AC-17 REMOTE ACCESS | AC-17.01-02 | See Exhibit F | | |
| | | | AC-17.01-03 | AC-17 REMOTE ACCESS | AC-17.01-03 | See Exhibit F | | |
| | | | AC-17.01-04 | AC-17 REMOTE ACCESS | AC-17.01-04 | See Exhibit F | | |
| | | | AC-17.01-05 | AC-17 REMOTE ACCESS | AC-17.01-05 | See Exhibit F | | |
| | | | | AC-17 REMOTE ACCESS | Supplemental Guidance | See Exhibit F | | |
| | | | AC-17(1).01-00 | AC-17 CONTROL ENHANCEMENTS | AC-17(1).01-00 | See Exhibit F | | |
| | | | | AC-17 CONTROL ENHANCEMENTS | Enhanced Supplemental | See Exhibit F | | |
| | | | AC-17(2).01-00 | AC-17 CONTROL ENHANCEMENTS | AC-17(2).01-00 | See Exhibit F | | |
| | | | | AC-17 CONTROL ENHANCEMENTS | Enhanced Supplemental | See Exhibit F | | |
| | | | AC-17(3).01-00 | AC-17 CONTROL ENHANCEMENTS | AC-17(3).01-00 | See Exhibit F | | |
| | | | | AC-17 CONTROL ENHANCEMENTS | Enhanced Supplemental | See Exhibit F | | |
| | | | AC-17(4).01-00 | AC-17 CONTROL ENHANCEMENTS | AC-17(4).01-00 | See Exhibit F | | |
| | | | | AC-17 CONTROL ENHANCEMENTS | Enhanced Supplemental | See Exhibit F | | |
| | | | AC-17(5).01-00 | AC-17 CONTROL ENHANCEMENTS | AC-17(5).01-00 | See Exhibit F | | |
| | | | AC-17(6).01-00 | AC-17 CONTROL ENHANCEMENTS | AC-17(6).01-00 | See Exhibit F | | |
| | | | AC-17(7).01-00 | AC-17 CONTROL ENHANCEMENTS | AC-17(7).01-00 | See Exhibit F | | |
| | | | | AC-17 CONTROL ENHANCEMENTS | Enhanced Supplemental | See Exhibit F | | |
| | | | AC-17(8).01-00 | AC-17 CONTROL ENHANCEMENTS | AC-17(8).01-00 | See Exhibit F | | |
| | | | | AC-17 CONTROL ENHANCEMENTS | Enhanced Supplemental | See Exhibit F | | |
| | | | AC-18.01-00 | AC-18 WIRELESS ACCESS | AC-18.01-00 | See Exhibit F | | |
| | | | AC-18.01-00 | AC-18 WIRELESS ACCESS | AC-18.01-00 | See Exhibit F | | |
| | | | AC-18.01-00 | AC-18 WIRELESS ACCESS | AC-18.01-00 | See Exhibit F | | |
| | | | AC-18.01-00 | AC-18 WIRELESS ACCESS | AC-18.01-00 | See Exhibit F | | |
| | | | AC-18.01-00 | AC-18 WIRELESS ACCESS | AC-18.01-00 | See Exhibit F | | |
| | | | | AC-18 WIRELESS ACCESS | Supplemental Guidance | See Exhibit F | | |
| | | | AC-18(1).01-00 | AC-18 CONTROL ENHANCEMENTS | AC-18(1).01-00 | See Exhibit F | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | AC-18 CONTROL ENHANCEMENTS | Enhanced Supplemental | See Exhibit F | | |
| | | | AC-18(2).01-00 | AC-18 CONTROL ENHANCEMENTS | AC-18(2).01-00 | See Exhibit F | | |
| | | | | AC-18 CONTROL ENHANCEMENTS | Enhanced Supplemental | See Exhibit F | | |
| | | | AC-18(3).01-00 | AC-18 CONTROL ENHANCEMENTS | AC-18(3).01-00 | See Exhibit F | | |
| | | | AC-18(4).01-00 | AC-18 CONTROL ENHANCEMENTS | AC-18(4).01-00 | See Exhibit F | | |
| | | | AC-18(5).01-00 | AC-18 CONTROL ENHANCEMENTS | AC-18(5).01-00 | See Exhibit F | | |
| | | | | AC-18 CONTROL ENHANCEMENTS | Enhanced Supplemental | See Exhibit F | | |
| | | | AC-19.01-00 | AC-19 ACCESS CONTROL FOR MOBILE DEVICES | AC-19.01-00 | See Exhibit F | | |
| | | | AC-19.01-01 | AC-19 ACCESS CONTROL FOR MOBILE DEVICES | AC-19.01-01 | See Exhibit F | | |
| | | | AC-19.01-02 | AC-19 ACCESS CONTROL FOR MOBILE DEVICES | AC-19.01-02 | See Exhibit F | | |
| | | | AC-19.01-03 | AC-19 ACCESS CONTROL FOR MOBILE DEVICES | AC-19.01-03 | See Exhibit F | | |
| | | | AC-19.01-04 | AC-19 ACCESS CONTROL FOR MOBILE DEVICES | AC-19.01-04 | See Exhibit F | | |
| | | | AC-19.01-05 | AC-19 ACCESS CONTROL FOR MOBILE DEVICES | AC-19.01-05 | See Exhibit F | | |
| | | | AC-19.01-06 | AC-19 ACCESS CONTROL FOR MOBILE DEVICES | AC-19.01-06 | See Exhibit F | | |
| | | | AC-19.01-07 | AC-19 ACCESS CONTROL FOR MOBILE DEVICES | AC-19.01-07 | See Exhibit F | | |
| | | | AC-19.01-08 | AC-19 ACCESS CONTROL FOR MOBILE DEVICES | AC-19.01-08 | See Exhibit F | | |
| | | | | AC-19 ACCESS CONTROL FOR MOBILE DEVICES | Supplemental Guidance | See Exhibit F | | |
| | | | | AC-19 ACCESS CONTROL FOR MOBILE DEVICES | Supplemental Guidance | See Exhibit F | | |
| | | | AC-19(1).01-00 | AC-19 CONTROL ENHANCEMENTS | AC-19(1).01-00 | See Exhibit F | | |
| | | | AC-19(2).01-00 | AC-19 CONTROL ENHANCEMENTS | AC-19(2).01-00 | See Exhibit F | | |
| | | | AC-19(3).01-00 | AC-19 CONTROL ENHANCEMENTS | AC-19(3).01-00 | See Exhibit F | | |
| | | | | AC-19 CONTROL ENHANCEMENTS | Enhanced Supplemental | See Exhibit F | | |
| | | | AC-19(4).01-00 | AC-19 CONTROL ENHANCEMENTS | AC-19(4).01-00 | See Exhibit F | | |
| | | | AC-19(4).01-01 | AC-19 CONTROL ENHANCEMENTS | AC-19(4).01-01 | See Exhibit F | | |
| | | | AC-19(4).01-02 | AC-19 CONTROL ENHANCEMENTS | AC-19(4).01-02 | See Exhibit F | | |
| | | | AC-20.01-00 | AC-20 USE OF EXTERNAL INFORMATION SYSTEMS | AC-20.01-00 | See Exhibit F | | |
| | | | AC-20.01-01 | AC-20 USE OF EXTERNAL INFORMATION SYSTEMS | AC-20.01-01 | See Exhibit F | | |
| | | | AC-20.01-02 | AC-20 USE OF EXTERNAL INFORMATION SYSTEMS | AC-20.01-02 | See Exhibit F | | |
| | | | | AC-20 USE OF EXTERNAL INFORMATION SYSTEMS | Enhanced Supplemental | See Exhibit F | | |
| | | | AC-20(1).01-00 | AC-20 CONTROL ENHANCEMENTS | AC-20(1).01-00 | See Exhibit F | | |
| | | | AC-20(1).01-01 | AC-20 CONTROL ENHANCEMENTS | AC-20(1).01-01 | See Exhibit F | | |
| | | | AC-20(1).01-02 | AC-20 CONTROL ENHANCEMENTS | AC-20(1).01-02 | See Exhibit F | | |
| | | | AC-20(2).01-00 | AC-20 CONTROL ENHANCEMENTS | AC-20(2).01-00 | See Exhibit F | | |
| | | | | AC-20 CONTROL ENHANCEMENTS | Enhanced Supplemental | See Exhibit F | | |

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| | | | AC-21.01-00 | AC-21 USER-BASED COLLABORATION AND | AC-21.01-00 | See Exhibit F | | |
| | | | AC-21.01-01 | AC-21 USER-BASED COLLABORATION AND | AC-21.01-01 | See Exhibit F | | |
| | | | AC-21.01-02 | AC-21 USER-BASED COLLABORATION AND | AC-21.01-02 | See Exhibit F | | |
| | | | | AC-21 USER-BASED COLLABORATION AND | Supplemental Guidance | See Exhibit F | | |
| | | | AC-21(1).01-00 | AC-21 USER-BASED COLLABORATION AND | AC-21(1).01-00 | See Exhibit F | | |
| | | | AC-22.01-00 | AC-22 PUBLICLY ACCESSIBLE CONTENT | AC-22.01-00 | See Exhibit F | | |
| | | | AC-22.01-01 | AC-22 PUBLICLY ACCESSIBLE CONTENT | AC-22.01-01 | See Exhibit F | | |
| | | | AC-22.01-02 | AC-22 PUBLICLY ACCESSIBLE CONTENT | AC-22.01-02 | See Exhibit F | | |
| | | | AC-22.01-03 | AC-22 PUBLICLY ACCESSIBLE CONTENT | AC-22.01-03 | See Exhibit F | | |
| | | | AC-22.01-04 | AC-22 PUBLICLY ACCESSIBLE CONTENT | AC-22.01-04 | See Exhibit F | | |
| | | | AC-22.01-05 | AC-22 PUBLICLY ACCESSIBLE CONTENT | AC-22.01-05 | See Exhibit F | | |
| | | | | AC-22 PUBLICLY ACCESSIBLE CONTENT | Supplemental Guidance | See Exhibit F | | |
| AT | | | AT-01.01-00 | AT-01 SECURITY AWARENESS AND TRAINING POLICY AND | AT-01.01-00 | See Exhibit F | | |
| | | | AT-01.01-01 | AT-01 SECURITY AWARENESS AND TRAINING POLICY AND | AT-01.01-01 | See Exhibit F | | |
| | | | AT-01.01-02 | AT-01 SECURITY AWARENESS AND TRAINING POLICY AND | AT-01.01-02 | See Exhibit F | | |
| | | | | AT-01 SECURITY AWARENESS AND TRAINING POLICY AND | Supplemental Guidance | See Exhibit F | | |
| | | | AT-02.01-00 | AT-02 SECURITY AWARENESS | AT-02.01-00 | See Exhibit F | | |
| | | | | AT-02 SECURITY AWARENESS | Supplemental Guidance | See Exhibit F | | |
| | | | AT-02(1).01-00 | AT-02 CONTROL ENHANCEMENTS | AT-02(1).01-00 | See Exhibit F | | |
| | | | | AT-02 CONTROL ENHANCEMENTS | Enhanced Supplemental | See Exhibit F | | |
| | | | AT-03.01-00 | AT-03 SECURITY TRAINING | AT-03.01-00 | See Exhibit F | | |
| | | | | AT-03 SECURITY TRAINING | Supplemental Guidance | See Exhibit F | | |
| | | | AT-03.01-01 | AT-03 SECURITY TRAINING | AT-03.01-01 | See Exhibit F | | |
| | | | | AT-03 SECURITY TRAINING | Enhanced Supplemental | See Exhibit F | | |
| | | | AT-03.01-02 | AT-03 SECURITY TRAINING | AT-03.01-02 | See Exhibit F | | |
| | | | | AT-03 SECURITY TRAINING | Enhanced Supplemental | See Exhibit F | | |
| | | | AT-04.01-00 | AT-04 SECURITY TRAINING RECORDS | AT-04.01-00 | See Exhibit F | | |
| | | | AT-04.01-01 | AT-04 SECURITY TRAINING RECORDS | AT-04.01-01 | See Exhibit F | | |
| | | | AT-04.01-02 | AT-04 SECURITY TRAINING RECORDS | AT-04.01-02 | See Exhibit F | | |
| | | | | AT-04 SECURITY TRAINING RECORDS | Supplemental Guidance | See Exhibit F | | |
| | | | AT-05.01-00 | AT-05 CONTACTS WITH SECURITY GROUPS AND ASSOCIATIONS | AT-05.01-00 | See Exhibit F | | |
| | | | | AT-05 CONTACTS WITH SECURITY GROUPS AND ASSOCIATIONS | Supplemental Guidance | See Exhibit F | | |
| AU | | | AU-01.01-00 | AU-01 AUDIT AND ACCOUNTABILITY POLICY AND | AU-01.01-00 | See Exhibit F | | |
| | | | AU-01.01-01 | AU-01 AUDIT AND ACCOUNTABILITY POLICY AND | AU-01.01-01 | See Exhibit F | | |

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| | | | AU-01.01-02 | AU-01 AUDIT AND ACCOUNTABILITY POLICY AND | AU-01.01-02 | See Exhibit F | | |
| | | | | AU-01 AUDIT AND ACCOUNTABILITY POLICY AND | Supplemental Guidance | See Exhibit F | | |
| | | | AU-02.01-00 | AU-02 AUDITABLE EVENTS | AU-02.01-00 | See Exhibit F | | |
| | | | AU-02.01-01 | AU-02 AUDITABLE EVENTS | AU-02.01-01 | See Exhibit F | | |
| | | | AU-02.01-02 | AU-02 AUDITABLE EVENTS | AU-02.01-02 | See Exhibit F | | |
| | | | AU-02.01-03 | AU-02 AUDITABLE EVENTS | AU-02.01-03 | See Exhibit F | | |
| | | | AU-02.01-04 | AU-02 AUDITABLE EVENTS | AU-02.01-04 | See Exhibit F | | |
| | | | | AU-02 AUDITABLE EVENTS | Supplemental Guidance | See Exhibit F | | |
| | | | AU-02(1).01-00 | AU-02 CONTROL ENHANCEMENTS | AU-02(1).01-00 | See Exhibit F | | |
| | | | AU-02(2).01-00 | AU-02 CONTROL ENHANCEMENTS | AU-02(2).01-00 | See Exhibit F | | |
| | | | AU-02(3).01-00 | AU-02 CONTROL ENHANCEMENTS | AU-02(3).01-00 | See Exhibit F | | |
| | | | | AU-02 CONTROL ENHANCEMENTS | Enhanced Supplemental | See Exhibit F | | |
| | | | AU-02(4).01-00 | AU-02 CONTROL ENHANCEMENTS | AU-02(4).01-00 | See Exhibit F | | |
| | | | AU-03.01-00 | AU-03 CONTENT OF AUDIT RECORDS | AU-03.01-00 | See Exhibit F | | |
| | | | | AU-03 CONTENT OF AUDIT RECORDS | Supplemental Guidance | See Exhibit F | | |
| | | | AU-03(1).01-00 | AU-03 CONTROL ENHANCEMENTS | AU-03(1).01-00 | See Exhibit F | | |
| | | | | AU-03 CONTROL ENHANCEMENTS | Enhanced Supplemental | See Exhibit F | | |
| | | | AU-03(2).01-00 | AU-03 CONTROL ENHANCEMENTS | AU-03(2).01-00 | See Exhibit F | | |
| | | | AU-04.01-00 | AU-04 AUDIT STORAGE CAPACITY | AU-04.01-00 | See Exhibit F | | |
| | | | | AU-04 AUDIT STORAGE CAPACITY | Supplemental Guidance | See Exhibit F | | |
| | | | AU-05.01-00 | AU-05 RESPONSE TO AUDIT PROCESSING FAILURES | AU-05.01-00 | See Exhibit F | | |
| | | | AU-05.01-01 | AU-05 RESPONSE TO AUDIT PROCESSING FAILURES | AU-05.01-01 | See Exhibit F | | |
| | | | AU-05.01-02 | AU-05 RESPONSE TO AUDIT PROCESSING FAILURES | AU-05.01-02 | See Exhibit F | | |
| | | | | AU-05 RESPONSE TO AUDIT PROCESSING FAILURES | Supplemental Guidance | See Exhibit F | | |
| | | | AU-05(1).01-00 | AU-05 CONTROL ENHANCEMENTS | AU-05(1).01-00 | See Exhibit F | | |
| | | | AU-05(2).01-00 | AU-05 CONTROL ENHANCEMENTS | AU-05(2).01-00 | See Exhibit F | | |
| | | | AU-05(3).01-00 | AU-05 CONTROL ENHANCEMENTS | AU-05(3).01-00 | See Exhibit F | | |
| | | | AU-05(4).01-00 | AU-05 CONTROL ENHANCEMENTS | AU-05(4).01-00 | See Exhibit F | | |
| | | | AU-06.01-00 | AU-06 AUDIT REVIEW, ANALYSIS, AND REPORTING | AU-06.01-00 | See Exhibit F | | |
| | | | AU-06.01-00 | AU-06 AUDIT REVIEW, ANALYSIS, AND REPORTING | AU-06.01-00 | See Exhibit F | | |
| | | | AU-06.01-00 | AU-06 AUDIT REVIEW, ANALYSIS, AND REPORTING | AU-06.01-00 | See Exhibit F | | |
| | | | AU-06(1).01-00 | AU-06 CONTROL ENHANCEMENTS | AU-06(1).01-00 | See Exhibit F | | |
| | | | AU-06(2).01-00 | AU-06 CONTROL ENHANCEMENTS | AU-06(2).01-00 | See Exhibit F | | |
| | | | AU-06(3).01-00 | AU-06 CONTROL ENHANCEMENTS | AU-06(3).01-00 | See Exhibit F | | |

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| | | | AU-06(4).01-00 | AU-06 CONTROL ENHANCEMENTS | AU-06(4).01-00 | See Exhibit F | | |
| | | | | AU-06 CONTROL ENHANCEMENTS | Enhanced Supplemental | See Exhibit F | | |
| | | | AU-06(5).01-00 | AU-06 CONTROL ENHANCEMENTS | AU-06(5).01-00 | See Exhibit F | | |
| | | | | AU-06 CONTROL ENHANCEMENTS | Enhanced Supplemental | See Exhibit F | | |
| | | | AU-06(6).01-00 | AU-06 CONTROL ENHANCEMENTS | AU-06(6).01-00 | See Exhibit F | | |
| | | | | AU-06 CONTROL ENHANCEMENTS | | See Exhibit F | | |
| | | | AU-06(7).01-00 | AU-06 CONTROL ENHANCEMENTS | AU-06(7).01-00 | See Exhibit F | | |
| | | | | AU-06 CONTROL ENHANCEMENTS | Enhanced Supplemental | See Exhibit F | | |
| | | | AU-06(8).01-00 | AU-06 CONTROL ENHANCEMENTS | AU-06(8).01-00 | See Exhibit F | | |
| | | | AU-06(9).01-00 | AU-06 CONTROL ENHANCEMENTS | AU-06(9).01-00 | See Exhibit F | | |
| | | | AU-07.01-00 | AU-07 AUDIT REDUCTION AND REPORT GENERATION | AU-07.01-00 | See Exhibit F | | |
| | | | | AU-07 AUDIT REDUCTION AND REPORT GENERATION | Supplemental Guidance | See Exhibit F | | |
| | | | AU-07(1).01-00 | AU-07 CONTROL ENHANCEMENTS | AU-07(1).01-00 | See Exhibit F | | |
| | | | AU-08.01-00 | AU-08 TIME STAMPS | AU-08.01-00 | See Exhibit F | | |
| | | | | AU-08 TIME STAMPS | Supplemental Guidance | See Exhibit F | | |
| | | | AU-08(1).01-00 | AU-08 CONTROL ENHANCEMENTS | AU-08(1).01-00 | See Exhibit F | | |
| | | | AU-09.01-00 | AU-09 PROTECTION OF AUDIT INFORMATION | AU-09.01-00 | See Exhibit F | | |
| | | | | AU-09 PROTECTION OF AUDIT INFORMATION | Supplemental Guidance | See Exhibit F | | |
| | | | AU-09(1).01-00 | AU-09 CONTROL ENHANCEMENTS | AU-09(1).01-00 | See Exhibit F | | |
| | | | AU-09(2).01-00 | AU-09 CONTROL ENHANCEMENTS | AU-09(2).01-00 | See Exhibit F | | |
| | | | AU-09(3).01-00 | AU-09 CONTROL ENHANCEMENTS | AU-09(3).01-00 | See Exhibit F | | |
| | | | | AU-09 CONTROL ENHANCEMENTS | Enhanced Supplemental | See Exhibit F | | |
| | | | AU-09(4).01-00 | AU-09 CONTROL ENHANCEMENTS | AU-09(4).01-00 | See Exhibit F | | |
| | | | AU-09(4).01-01 | AU-09 CONTROL ENHANCEMENTS | AU-09(4).01-01 | See Exhibit F | | |
| | | | AU-09(4).01-02 | AU-09 CONTROL ENHANCEMENTS | AU-09(4).01-02 | See Exhibit F | | |
| | | | | AU-09 CONTROL ENHANCEMENTS | Enhanced Supplemental | See Exhibit F | | |
| | | | AU-10.01-00 | AU-10 NON-REPUDIATION | AU-10.01-00 | See Exhibit F | | |
| | | | | AU-10 NON-REPUDIATION | Supplemental Guidance | See Exhibit F | | |
| | | | AU-10(1).01-00 | AU-10 CONTROL ENHANCEMENTS | AU-10(1).01-00 | See Exhibit F | | |
| | | | | AU-10 CONTROL ENHANCEMENTS | Enhanced Supplemental | See Exhibit F | | |
| | | | AU-10(2).01-00 | AU-10 CONTROL ENHANCEMENTS | AU-10(2).01-00 | See Exhibit F | | |
| | | | | AU-10 CONTROL ENHANCEMENTS | Enhanced Supplemental | See Exhibit F | | |
| | | | AU-10(3).01-00 | AU-10 CONTROL ENHANCEMENTS | AU-10(3).01-00 | See Exhibit F | | |
| | | | | AU-10 CONTROL ENHANCEMENTS | Enhanced Supplemental | See Exhibit F | | |

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| | | | AU-10(4).01-00 | AU-10 CONTROL ENHANCEMENTS | AU-10(4).01-00 | See Exhibit F | | |
| | | | | AU-10 CONTROL ENHANCEMENTS | Enhanced Supplemental | See Exhibit F | | |
| | | | AU-10(5).01-00 | AU-10 CONTROL ENHANCEMENTS | AU-10(5).01-00 | See Exhibit F | | |
| | | | AU-11.01-00 | AU-11 AUDIT RECORD RETENTION | AU-11.01-00 | See Exhibit F | | |
| | | | | AU-11 AUDIT RECORD RETENTION | Supplemental Guidance | See Exhibit F | | |
| | | | AU-12.01-00 | AU-12 AUDIT GENERATION | AU-12.01-00 | See Exhibit F | | |
| | | | AU-12.01-01 | AU-12 AUDIT GENERATION | AU-12.01-01 | See Exhibit F | | |
| | | | AU-12.01-02 | AU-12 AUDIT GENERATION | AU-12.01-02 | See Exhibit F | | |
| | | | AU-12.01-03 | AU-12 AUDIT GENERATION | AU-12.01-03 | See Exhibit F | | |
| | | | | AU-12 AUDIT GENERATION | Supplemental Guidance | See Exhibit F | | |
| | | | AU-12(1).01-00 | AU-12 CONTROL ENHANCEMENTS | AU-12(1).01-00 | See Exhibit F | | |
| | | | | AU-12 CONTROL ENHANCEMENTS | Enhanced Supplemental | See Exhibit F | | |
| | | | AU-12(2).01-00 | AU-12 CONTROL ENHANCEMENTS | AU-12(2).01-00 | See Exhibit F | | |
| | | | | AU-12 CONTROL ENHANCEMENTS | Enhanced Supplemental | See Exhibit F | | |
| | | | AU-13.01-00 | AU-13 MONITORING FOR INFORMATION DISCLOSURE | AU-13.01-00 | See Exhibit F | | |
| | | | AU-14.01-00 | AU-14 SESSION AUDIT | AU-14.01-00 | See Exhibit F | | |
| | | | AU-14.01-01 | AU-14 SESSION AUDIT | AU-14.01-01 | See Exhibit F | | |
| | | | AU-14.01-02 | AU-14 SESSION AUDIT | AU-14.01-02 | See Exhibit F | | |
| | | | | AU-14 SESSION AUDIT | Supplemental Guidance | See Exhibit F | | |
| | | | AU-14(1).01-00 | AU-14 CONTROL ENHANCEMENTS | AU-14(1).01-00 | See Exhibit F | | |
| CA | | | CA-01.01-00 | CA-01 SECURITY ASSESSMENT AND AUTHORIZATION POLICIES | CA-01.01-00 | See Exhibit F | | |
| | | | CA-01.01-01 | CA-01 SECURITY ASSESSMENT AND AUTHORIZATION POLICIES | CA-01.01-01 | See Exhibit F | | |
| | | | CA-01.01-02 | CA-01 SECURITY ASSESSMENT AND AUTHORIZATION POLICIES | CA-01.01-02 | See Exhibit F | | |
| | | | | CA-01 SECURITY ASSESSMENT AND AUTHORIZATION POLICIES | Supplemental Guidance | See Exhibit F | | |
| | | | CA-02.01-00 | CA-02 SECURITY ASSESSMENTS | CA-02.01-00 | See Exhibit F | | |
| | | | CA-02.01-01 | CA-02 SECURITY ASSESSMENTS | CA-02.01-01 | See Exhibit F | | |
| | | | CA-02.01-02 | CA-02 SECURITY ASSESSMENTS | CA-02.01-02 | See Exhibit F | | |
| | | | CA-02.01-03 | CA-02 SECURITY ASSESSMENTS | CA-02.01-03 | See Exhibit F | | |
| | | | CA-02.01-04 | CA-02 SECURITY ASSESSMENTS | CA-02.01-04 | See Exhibit F | | |
| | | | CA-02(1).01-00 | CA-02 SECURITY ASSESSMENTS | CA-02(1).01-00 | See Exhibit F | | |
| | | | | CA-02 SECURITY ASSESSMENTS | Enhanced Supplemental | See Exhibit F | | |
| | | | CA-02(2).01-00 | CA-02 SECURITY ASSESSMENTS | CA-02(2).01-00 | See Exhibit F | | |
| | | | | CA-02 SECURITY ASSESSMENTS | Enhanced Supplemental | See Exhibit F | | |
| | | | CA-03.01-00 | CA-03 INFORMATION SYSTEM CONNECTIONS | CA-03.01-00 | See Exhibit F | | |

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| | | | CA-03.01-01 | CA-03 INFORMATION SYSTEM CONNECTIONS | CA-03.01-01 | See Exhibit F | | |
| | | | CA-03.01-02 | CA-03 INFORMATION SYSTEM CONNECTIONS | CA-03.01-02 | See Exhibit F | | |
| | | | CA-03.01-03 | CA-03 INFORMATION SYSTEM CONNECTIONS | CA-03.01-03 | See Exhibit F | | |
| | | | | CA-03 INFORMATION SYSTEM CONNECTIONS | Supplemental Guidance | See Exhibit F | | |
| | | | CA-03(1).01-00 | CA-03 CONTROL ENHANCEMENTS | CA-03(1).01-00 | See Exhibit F | | |
| | | | | CA-03 CONTROL ENHANCEMENTS | | See Exhibit F | | |
| | | | CA-03(2).01-00 | CA-03 CONTROL ENHANCEMENTS | CA-03(2).01-00 | See Exhibit F | | |
| | | | | CA-03 CONTROL ENHANCEMENTS | | See Exhibit F | | |
| | | | CA-04.01-00 | CA-04 SECURITY CERTIFICATION | CA-04.01-00 | See Exhibit F | | |
| | | | CA-05.01-00 | CA-05 PLAN OF ACTION AND MILESTONES | CA-05.01-00 | See Exhibit F | | |
| | | | CA-05.01-01 | CA-05 PLAN OF ACTION AND MILESTONES | CA-05.01-01 | See Exhibit F | | |
| | | | CA-05.01-02 | CA-05 PLAN OF ACTION AND MILESTONES | CA-05.01-02 | See Exhibit F | | |
| | | | | CA-05 PLAN OF ACTION AND MILESTONES | Supplemental Guidance | See Exhibit F | | |
| | | | CA-05(1).01-00 | CA-05 CONTROL ENHANCEMENTS | CA-05(1).01-00 | See Exhibit F | | |
| | | | CA-06.01-00 | CA-06 SECURITY AUTHORIZATION | CA-06.01-00 | See Exhibit F | | |
| | | | CA-06.01-01 | CA-06 SECURITY AUTHORIZATION | CA-06.01-01 | See Exhibit F | | |
| | | | CA-06.01-02 | CA-06 SECURITY AUTHORIZATION | CA-06.01-02 | See Exhibit F | | |
| | | | CA-06.01-03 | CA-06 SECURITY AUTHORIZATION | CA-06.01-03 | See Exhibit F | | |
| | | | CA-07.01-00 | CA-07 CONTINUOUS MONITORING | CA-07.01-00 | See Exhibit F | | |
| | | | CA-07.01-01 | CA-07 CONTINUOUS MONITORING | CA-07.01-01 | See Exhibit F | | |
| | | | CA-07.01-02 | CA-07 CONTINUOUS MONITORING | CA-07.01-02 | See Exhibit F | | |
| | | | CA-07.01-03 | CA-07 CONTINUOUS MONITORING | CA-07.01-03 | See Exhibit F | | |
| | | | CA-07.01-04 | CA-07 CONTINUOUS MONITORING | CA-07.01-04 | See Exhibit F | | |
| | | | | CA-07 CONTINUOUS MONITORING | Supplemental Guidance | See Exhibit F | | |
| | | | CA-07(1).01-00 | CA-07 CONTROL ENHANCEMENTS | CA-07(1).01-00 | See Exhibit F | | |
| | | | | CA-07 CONTROL ENHANCEMENTS | Enhanced Supplemental | See Exhibit F | | |
| | | | CA-07(2).01-00 | CA-07 CONTROL ENHANCEMENTS | CA-07(2).01-00 | See Exhibit F | | |
| | | | | CA-07 CONTROL ENHANCEMENTS | Enhanced Supplemental | See Exhibit F | | |
| CM | | | CM-01.01-00 | CM-01 CONFIGURATION MANAGEMENT POLICY AND | CM-01.01-00 | See Exhibit F | | |
| | | | CM-01.01-01 | CM-01 CONFIGURATION MANAGEMENT POLICY AND | CM-01.01-01 | See Exhibit F | | |
| | | | CM-01.01-02 | CM-01 CONFIGURATION MANAGEMENT POLICY AND | CM-01.01-02 | See Exhibit F | | |
| | | | | CM-01 CONFIGURATION MANAGEMENT POLICY AND | Supplemental Guidance | See Exhibit F | | |
| | | | CM-02.01-00 | CM-02 BASELINE CONFIGURATION | CM-02.01-00 | See Exhibit F | | |
| | | | | CM-02 BASELINE CONFIGURATION | Supplemental Guidance | See Exhibit F | | |

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| | | | CM-02(1).01-00 | CM-02 CONTROL ENHANCEMENTS | CM-02(1).01-00 | See Exhibit F | | |
| | | | CM-02(1).01-01 | CM-02 CONTROL ENHANCEMENTS | CM-02(1).01-01 | See Exhibit F | | |
| | | | CM-02(1).01-02 | CM-02 CONTROL ENHANCEMENTS | CM-02(1).01-02 | See Exhibit F | | |
| | | | CM-02(1).01-03 | CM-02 CONTROL ENHANCEMENTS | CM-02(1).01-03 | See Exhibit F | | |
| | | | CM-02(2).01-00 | CM-02 CONTROL ENHANCEMENTS | CM-02(2).01-00 | See Exhibit F | | |
| | | | | CM-02 CONTROL ENHANCEMENTS | Enhanced Supplemental | See Exhibit F | | |
| | | | CM-02(3).01-00 | CM-02 CONTROL ENHANCEMENTS | CM-02(3).01-00 | See Exhibit F | | |
| | | | CM-02(4).01-00 | CM-02 CONTROL ENHANCEMENTS | CM-02(4).01-00 | See Exhibit F | | |
| | | | CM-02(4).01-01 | CM-02 CONTROL ENHANCEMENTS | CM-02(4).01-01 | See Exhibit F | | |
| | | | CM-02(4).01-02 | CM-02 CONTROL ENHANCEMENTS | CM-02(4).01-02 | See Exhibit F | | |
| | | | CM-02(5).01-00 | CM-02 CONTROL ENHANCEMENTS | CM-02(5).01-00 | See Exhibit F | | |
| | | | CM-02(5).01-01 | CM-02 CONTROL ENHANCEMENTS | CM-02(5).01-01 | See Exhibit F | | |
| | | | CM-02(5).01-02 | CM-02 CONTROL ENHANCEMENTS | CM-02(5).01-02 | See Exhibit F | | |
| | | | CM-02(6).01-00 | CM-02 CONTROL ENHANCEMENTS | CM-02(6).01-00 | See Exhibit F | | |
| | | | CM-03.01-00 | CM-03 CONFIGURATION CHANGE CONTROL | CM-03.01-00 | See Exhibit F | | |
| | | | CM-03.01-01 | CM-03 CONFIGURATION CHANGE CONTROL | CM-03.01-01 | See Exhibit F | | |
| | | | CM-03.01-02 | CM-03 CONFIGURATION CHANGE CONTROL | CM-03.01-02 | See Exhibit F | | |
| | | | CM-03.01-03 | CM-03 CONFIGURATION CHANGE CONTROL | CM-03.01-03 | See Exhibit F | | |
| | | | CM-03.01-04 | CM-03 CONFIGURATION CHANGE CONTROL | CM-03.01-04 | See Exhibit F | | |
| | | | CM-03.01-05 | CM-03 CONFIGURATION CHANGE CONTROL | CM-03.01-05 | See Exhibit F | | |
| | | | CM-03.01-06 | CM-03 CONFIGURATION CHANGE CONTROL | CM-03.01-06 | See Exhibit F | | |
| | | | | CM-03 CONFIGURATION CHANGE CONTROL | Supplemental Guidance | See Exhibit F | | |
| | | | CM-03(1).01-00 | CM-03 CONTROL ENHANCEMENTS | CM-03(1).01-00 | See Exhibit F | | |
| | | | CM-03(1).01-01 | CM-03 CONTROL ENHANCEMENTS | CM-03(1).01-01 | See Exhibit F | | |
| | | | CM-03(1).01-02 | CM-03 CONTROL ENHANCEMENTS | CM-03(1).01-02 | See Exhibit F | | |
| | | | CM-03(1).01-03 | CM-03 CONTROL ENHANCEMENTS | CM-03(1).01-03 | See Exhibit F | | |
| | | | CM-03(1).01-04 | CM-03 CONTROL ENHANCEMENTS | CM-03(1).01-04 | See Exhibit F | | |
| | | | CM-03(1).01-05 | CM-03 CONTROL ENHANCEMENTS | CM-03(1).01-05 | See Exhibit F | | |
| | | | CM-03(2).01-00 | CM-03 CONTROL ENHANCEMENTS | CM-03(2).01-00 | See Exhibit F | | |
| | | | | CM-03 CONTROL ENHANCEMENTS | Enhanced Supplemental | See Exhibit F | | |
| | | | CM-03(3).01-00 | CM-03 CONTROL ENHANCEMENTS | CM-03(3).01-00 | See Exhibit F | | |
| | | | CM-03(4).01-00 | CM-03 CONTROL ENHANCEMENTS | CM-03(4).01-00 | See Exhibit F | | |
| | | | | CM-03 CONTROL ENHANCEMENTS | Enhanced Supplemental | See Exhibit F | | |
| | | | CM-04.01-00 | CM-04 SECURITY IMPACT ANALYSIS | CM-04.01-00 | See Exhibit F | | |

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| | | | | CM-04 SECURITY IMPACT ANALYSIS | Supplemental Guidance | See Exhibit F | | |
| | | | CM-04(1).01-00 | CM-04 CONTROL ENHANCEMENTS | CM-04(1).01-00 | See Exhibit F | | |
| | | | CM-04(2).01-00 | CM-04 CONTROL ENHANCEMENTS | CM-04(2).01-00 | See Exhibit F | | |
| | | | CM-05.01-00 | CM-05 ACCESS RESTRICTIONS FOR CHANGE | CM-05.01-00 | See Exhibit F | | |
| | | | | CM-05 ACCESS RESTRICTIONS FOR CHANGE | Supplemental Guidance | See Exhibit F | | |
| | | | CM-05(1).01-00 | CM-05 CONTROL ENHANCEMENTS | CM-05(1).01-00 | See Exhibit F | | |
| | | | CM-05(2).01-00 | CM-05 CONTROL ENHANCEMENTS | CM-05(2).01-00 | See Exhibit F | | |
| | | | CM-05(3).01-00 | CM-05 CONTROL ENHANCEMENTS | CM-05(3).01-00 | See Exhibit F | | |
| | | | | CM-05 CONTROL ENHANCEMENTS | Enhanced Supplemental | See Exhibit F | | |
| | | | CM-05(4).01-00 | CM-05 CONTROL ENHANCEMENTS | CM-05(4).01-00 | See Exhibit F | | |
| | | | CM-05(5).01-00 | CM-05 CONTROL ENHANCEMENTS | CM-05(5).01-00 | See Exhibit F | | |
| | | | CM-05(5).01-01 | CM-05 CONTROL ENHANCEMENTS | CM-05(5).01-01 | See Exhibit F | | |
| | | | CM-05(5).01-02 | CM-05 CONTROL ENHANCEMENTS | CM-05(5).01-02 | See Exhibit F | | |
| | | | CM-05(6).01-00 | CM-05 CONTROL ENHANCEMENTS | CM-05(6).01-00 | See Exhibit F | | |
| | | | CM-05(7).01-00 | CM-05 CONTROL ENHANCEMENTS | CM-05(7).01-00 | See Exhibit F | | |
| | | | | CM-05 CONTROL ENHANCEMENTS | Enhanced Supplemental | See Exhibit F | | |
| | | | CM-06.01-00 | CM-06 CONFIGURATION SETTINGS | CM-06.01-00 | See Exhibit F | | |
| | | | CM-06.01-01 | CM-06 CONFIGURATION SETTINGS | CM-06.01-01 | See Exhibit F | | |
| | | | CM-06.01-02 | CM-06 CONFIGURATION SETTINGS | CM-06.01-02 | See Exhibit F | | |
| | | | CM-06.01-03 | CM-06 CONFIGURATION SETTINGS | CM-06.01-03 | See Exhibit F | | |
| | | | CM-06.01-04 | CM-06 CONFIGURATION SETTINGS | CM-06.01-04 | See Exhibit F | | |
| | | | | CM-06 CONFIGURATION SETTINGS | Supplemental Guidance | See Exhibit F | | |
| | | | CM-06(1).01-00 | CM-06 CONTROL ENHANCEMENTS | CM-06(1).01-00 | See Exhibit F | | |
| | | | CM-06(2).01-00 | CM-06 CONTROL ENHANCEMENTS | CM-06(2).01-00 | See Exhibit F | | |
| | | | | CM-06 CONTROL ENHANCEMENTS | Enhanced Supplemental | See Exhibit F | | |
| | | | CM-06(3).01-00 | CM-06 CONTROL ENHANCEMENTS | CM-06(3).01-00 | See Exhibit F | | |
| | | | CM-06(4).01-00 | CM-06 CONTROL ENHANCEMENTS | CM-06(4).01-00 | See Exhibit F | | |
| | | | CM-07.01-00 | CM-07 LEAST FUNCTIONALITY | CM-07.01-00 | See Exhibit F | | |
| | | | | CM-07 LEAST FUNCTIONALITY | Supplemental Guidance | See Exhibit F | | |
| | | | CM-07(1).01-00 | CM-07 CONTROL ENHANCEMENTS | CM-07(1).01-00 | See Exhibit F | | |
| | | | CM-07(2).01-00 | CM-07 CONTROL ENHANCEMENTS | CM-07(2).01-00 | See Exhibit F | | |
| | | | CM-07(3).01-00 | CM-07 CONTROL ENHANCEMENTS | CM-07(3).01-00 | See Exhibit F | | |
| | | | | CM-07 CONTROL ENHANCEMENTS | Enhanced Supplemental | See Exhibit F | | |
| | | | CM-08.01-00 | CM-08 INFORMATION SYSTEM COMPONENT INVENTORY | CM-08.01-00 | See Exhibit F | | |

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| | | | CM-08.01-01 | CM-08 INFORMATION SYSTEM COMPONENT INVENTORY | CM-08.01-01 | See Exhibit F | | |
| | | | CM-08.01-02 | CM-08 INFORMATION SYSTEM COMPONENT INVENTORY | CM-08.01-02 | See Exhibit F | | |
| | | | CM-08.01-03 | CM-08 INFORMATION SYSTEM COMPONENT INVENTORY | CM-08.01-03 | See Exhibit F | | |
| | | | CM-08.01-04 | CM-08 INFORMATION SYSTEM COMPONENT INVENTORY | CM-08.01-04 | See Exhibit F | | |
| | | | CM-08.01-05 | CM-08 INFORMATION SYSTEM COMPONENT INVENTORY | CM-08.01-05 | See Exhibit F | | |
| | | | | CM-08 INFORMATION SYSTEM COMPONENT INVENTORY | Supplemental Guidance | See Exhibit F | | |
| | | | CM-08(1).01-00 | CM-08 CONTROL ENHANCEMENTS | CM-08(1).01-00 | See Exhibit F | | |
| | | | CM-08(2).01-00 | CM-08 CONTROL ENHANCEMENTS | CM-08(2).01-00 | See Exhibit F | | |
| | | | | CM-08 CONTROL ENHANCEMENTS | Enhanced Supplemental | See Exhibit F | | |
| | | | CM-08(3).01-00 | CM-08 CONTROL ENHANCEMENTS | CM-08(3).01-00 | See Exhibit F | | |
| | | | CM-08(3).01-01 | CM-08 CONTROL ENHANCEMENTS | CM-08(3).01-01 | See Exhibit F | | |
| | | | CM-08(3).01-02 | CM-08 CONTROL ENHANCEMENTS | CM-08(3).01-02 | See Exhibit F | | |
| | | | | CM-08 CONTROL ENHANCEMENTS | Enhanced Supplemental | See Exhibit F | | |
| | | | CM-08(4).01-00 | CM-08 CONTROL ENHANCEMENTS | CM-08(4).01-00 | See Exhibit F | | |
| | | | CM-08(5).01-00 | CM-08 CONTROL ENHANCEMENTS | CM-08(5).01-00 | See Exhibit F | | |
| | | | CM-08(6).01-00 | CM-08 CONTROL ENHANCEMENTS | CM-08(6).01-00 | See Exhibit F | | |
| | | | | CM-08 CONTROL ENHANCEMENTS | Enhanced Supplemental | See Exhibit F | | |
| | | | CM-09.01-00 | CM-09 CONFIGURATION MANAGEMENT PLAN | CM-09.01-00 | See Exhibit F | | |
| | | | CM-09.01-01 | CM-09 CONFIGURATION MANAGEMENT PLAN | CM-09.01-01 | See Exhibit F | | |
| | | | CM-09.01-02 | CM-09 CONFIGURATION MANAGEMENT PLAN | CM-09.01-02 | See Exhibit F | | |
| | | | CM-09.01-03 | CM-09 CONFIGURATION MANAGEMENT PLAN | CM-09.01-03 | See Exhibit F | | |
| | | | | CM-09 CONFIGURATION MANAGEMENT PLAN | Supplemental Guidance | See Exhibit F | | |
| | | | CM-09(1).01-00 | CM-09 CONTROL ENHANCEMENTS | CM-09(1).01-00 | See Exhibit F | | |
| | | | | CM-09 CONTROL ENHANCEMENTS | Enhanced Supplemental | See Exhibit F | | |
| CP | | | CP-01.01-00 | CP-1 CONTINGENCY PLANNING POLICY AND PROCEDURES | CP-01.01-00 | See Exhibit F | | |
| | | | CP-01.01-01 | | CP-01.01-01 | See Exhibit F | | |
| | | | CP-01.01-02 | | CP-01.01-02 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | CP-02.01-00 | CP-2 CONTINGENCY PLAN | CP-02.01-00 | See Exhibit F | | |
| | | | CP-02.01-01 | | CP-02.01-01 | See Exhibit F | | |
| | | | CP-02.01-02 | | CP-02.01-02 | See Exhibit F | | |
| | | | CP-02.01-03 | | CP-02.01-03 | See Exhibit F | | |
| | | | CP-02.01-04 | | CP-02.01-04 | See Exhibit F | | |
| | | | CP-02.01-05 | | CP-02.01-05 | See Exhibit F | | |

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| | | | CP-02.01-06 | | CP-02.01-06 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | CP-02(1).01-00 | Control Enhancements: | CP-02(1).01-00 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | CP-02(2).01-00 | Control Enhancements: | CP-02(2).01-00 | See Exhibit F | | |
| | | | CP-02(3).01-00 | Control Enhancements: | CP-02(3).01-00 | See Exhibit F | | |
| | | | CP-02(4).01-00 | Control Enhancements: | CP-02(4).01-00 | See Exhibit F | | |
| | | | CP-02(5).01-00 | Control Enhancements: | CP-02(5).01-00 | See Exhibit F | | |
| | | | CP-02(6).01-00 | Control Enhancements: | CP-02(6).01-00 | See Exhibit F | | |
| | | | CP-03.01-00 | CP-3 CONTINGENCY TRAINING | CP-03.01-00 | See Exhibit F | | |
| | | | CP-03(1).01-00 | Control Enhancements: | CP-03(1).01-00 | See Exhibit F | | |
| | | | CP-03(2).01-00 | Control Enhancements: | CP-03(2).01-00 | See Exhibit F | | |
| | | | CP-04.01-00 | CP-4 CONTINGENCY PLAN TESTING AND EXERCISES | CP-04.01-00 | See Exhibit F | | |
| | | | CP-04.01-01 | | CP-04.01-01 | See Exhibit F | | |
| | | | CP-04.01-02 | | CP-04.01-02 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | CP-04(1).01-00 | Control Enhancements: | CP-04(1).01-00 | See Exhibit F | | |
| | | | | | | See Exhibit F | | |
| | | | CP-04(2).01-00 | Control Enhancements: | CP-04(2).01-00 | See Exhibit F | | |
| | | | CP-04(3).01-00 | Control Enhancements: | CP-04(3).01-00 | See Exhibit F | | |
| | | | CP-04(4).01-00 | Control Enhancements: | CP-04(4).01-00 | See Exhibit F | | |
| | | | CP-05.01-00 | CP-5 CONTINGENCY PLAN UPDATE | CP-05.01-00 | See Exhibit F | | |
| | | | CP-06.01-00 | CP-6 ALTERNATE STORAGE SITE | CP-06.01-00 | See Exhibit F | | |
| | | | CP-06(1).01-00 | Control Enhancements: | CP-06(1).01-00 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | CP-06(2).01-00 | Control Enhancements: | CP-06(2).01-00 | See Exhibit F | | |
| | | | CP-06(3).01-00 | Control Enhancements: | CP-06(3).01-00 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | CP-07.01-00 | CP-7 ALTERNATE PROCESSING SITE | CP-07.01-00 | See Exhibit F | | |
| | | | CP-07.01-01 | | CP-07.01-01 | See Exhibit F | | |
| | | | CP-07.01-02 | | CP-07.01-02 | See Exhibit F | | |
| | | | CP-07(1).01-00 | Control Enhancements: | CP-07(1).01-00 | See Exhibit F | | |
| | | | | | | See Exhibit F | | |
| | | | CP-07(2).01-00 | Control Enhancements: | CP-07(2).01-00 | See Exhibit F | | |

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| | | | CP-07(3).01-00 | Control Enhancements: | CP-07(3).01-00 | See Exhibit F | | |
| | | | CP-07(4).01-00 | Control Enhancements: | CP-07(4).01-00 | See Exhibit F | | |
| | | | CP-07(5).01-00 | Control Enhancements: | CP-07(5).01-00 | See Exhibit F | | |
| | | | CP-08.01-00 | CP-8 TELECOMMUNICATIONS SERVICES | CP-08.01-00 | See Exhibit F | | |
| | | | CP-08(1).01-00 | Control Enhancements: | CP-08(1).01-00 | See Exhibit F | | |
| | | | CP-08(1).01-01 | Control Enhancements: | CP-08(1).01-01 | See Exhibit F | | |
| | | | CP-08(1).01-02 | Control Enhancements: | CP-08(1).01-02 | See Exhibit F | | |
| | | | CP-08(2).01-00 | Control Enhancements: | CP-08(2).01-00 | See Exhibit F | | |
| | | | CP-08(3).01-00 | Control Enhancements: | CP-08(3).01-00 | See Exhibit F | | |
| | | | CP-08(4).01-00 | Control Enhancements: | CP-08(4).01-00 | See Exhibit F | | |
| | | | CP-09.01-00 | CP-9 INFORMATION SYSTEM BACKUP | CP-09.01-00 | See Exhibit F | | |
| | | | CP-09.01-01 | | CP-09.01-01 | See Exhibit F | | |
| | | | CP-09.01-02 | | CP-09.01-02 | See Exhibit F | | |
| | | | CP-09.01-03 | | CP-09.01-03 | See Exhibit F | | |
| | | | CP-09.01-04 | | CP-09.01-04 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | CP-09(1).01-00 | Control Enhancements: | CP-09(1).01-00 | See Exhibit F | | |
| | | | CP-09(2).01-00 | Control Enhancements: | CP-09(2).01-00 | See Exhibit F | | |
| | | | CP-09(3).01-00 | Control Enhancements: | CP-09(3).01-00 | See Exhibit F | | |
| | | | CP-09(4).01-00 | Control Enhancements: | CP-09(4).01-00 | See Exhibit F | | |
| | | | CP-09(5).01-00 | Control Enhancements: | CP-09(5).01-00 | See Exhibit F | | |
| | | | CP-09(6).01-00 | Control Enhancements: | CP-09(6).01-00 | See Exhibit F | | |
| | | | CP-10.01-00 | CP-10 INFORMATION SYSTEM RECOVERY AND | CP-10.01-00 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | CP-10(1).01-00 | Control Enhancements: | CP-10(1).01-00 | See Exhibit F | | |
| | | | CP-10(2).01-00 | Control Enhancements: | CP-10(2).01-00 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | CP-10(3).01-00 | Control Enhancements: | CP-10(3).01-00 | See Exhibit F | | |
| | | | CP-10(4).01-00 | Control Enhancements: | CP-10(4).01-00 | See Exhibit F | | |
| | | | CP-10(5).01-00 | Control Enhancements: | CP-10(5).01-00 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | CP-10(6).01-00 | Control Enhancements: | CP-10(6).01-00 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| IA | | | IA-01.01-00 | IA-1 IDENTIFICATION AND AUTHENTICATION POLICY AND | IA-01.01-00 | See Exhibit F | | |

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| | | | IA-01.01-01 | | IA-01.01-01 | See Exhibit F | | |
| | | | IA-01.01-02 | | IA-01.01-02 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | IA-02.01-00 | IA-2 IDENTIFICATION AND AUTHENTICATION | IA-02.01-00 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | IA-02(1).01-00 | Control Enhancements: | IA-02(1).01-00 | See Exhibit F | | |
| | | | IA-02(2).01-00 | Control Enhancements: | IA-02(2).01-00 | See Exhibit F | | |
| | | | IA-02(3).01-00 | Control Enhancements: | IA-02(3).01-00 | See Exhibit F | | |
| | | | IA-02(4).01-00 | Control Enhancements: | IA-02(4).01-00 | See Exhibit F | | |
| | | | IA-02(5).01-00 | Control Enhancements: | IA-02(5).01-00 | See Exhibit F | | |
| | | | IA-02(5).01-01 | Control Enhancements: | IA-02(5).01-01 | See Exhibit F | | |
| | | | IA-02(5).01-02 | Control Enhancements: | IA-02(5).01-02 | See Exhibit F | | |
| | | | IA-02(6).01-00 | Control Enhancements: | IA-02(6).01-00 | See Exhibit F | | |
| | | | IA-02(7).01-00 | Control Enhancements: | IA-02(7).01-00 | See Exhibit F | | |
| | | | IA-02(8).01-00 | Control Enhancements: | IA-02(8).01-00 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | IA-02(9).01-00 | Control Enhancements: | IA-02(9).01-00 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | IA-03.01-00 | IA-3 DEVICE IDENTIFICATION AND AUTHENTICATION | IA-03.01-00 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | IA-03(1).01-00 | Control Enhancements: | IA-03(1).01-00 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | IA-03(2).01-00 | Control Enhancements: | IA-03(2).01-00 | See Exhibit F | | |
| | | | IA-03(3).01-00 | Control Enhancements: | IA-03(3).01-00 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | IA-04.01-00 | IA-4 IDENTIFIER MANAGEMENT | IA-04.01-00 | See Exhibit F | | |
| | | | IA-04.01-01 | | IA-04.01-01 | See Exhibit F | | |
| | | | IA-04.01-02 | | IA-04.01-02 | See Exhibit F | | |
| | | | IA-04.01-03 | | IA-04.01-03 | See Exhibit F | | |
| | | | IA-04.01-04 | | IA-04.01-04 | See Exhibit F | | |
| | | | IA-04.01-05 | | IA-04.01-05 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | | | | See Exhibit F | | |
| | | | IA-04(1).01-00 | Control Enhancements: | IA-04(1).01-00 | See Exhibit F | | |

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| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | IA-04(2).01-00 | Control Enhancements: | IA-04(2).01-00 | See Exhibit F | | |
| | | | IA-04(3).01-00 | Control Enhancements: | IA-04(3).01-00 | See Exhibit F | | |
| | | | IA-04(4).01-00 | Control Enhancements: | IA-04(4).01-00 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | IA-04(5).01-00 | Control Enhancements: | IA-04(5).01-00 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | IA-05.01-00 | IA-5 AUTHENTICATOR MANAGEMENT | IA-05.01-00 | See Exhibit F | | |
| | | | IA-05.01-01 | | IA-05.01-01 | See Exhibit F | | |
| | | | IA-05.01-02 | | IA-05.01-02 | See Exhibit F | | |
| | | | IA-05.01-03 | | IA-05.01-03 | See Exhibit F | | |
| | | | IA-05.01-04 | | IA-05.01-04 | See Exhibit F | | |
| | | | IA-05.01-05 | | IA-05.01-05 | See Exhibit F | | |
| | | | IA-05.01-06 | | IA-05.01-06 | See Exhibit F | | |
| | | | IA-05.01-07 | | IA-05.01-07 | See Exhibit F | | |
| | | | IA-05.01-08 | | IA-05.01-08 | See Exhibit F | | |
| | | | IA-05.01-09 | | IA-05.01-09 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | IA-05(1).01-00 | Control Enhancements: | IA-05(1).01-00 | See Exhibit F | | |
| | | | IA-05(1).01-01 | Control Enhancements: | IA-05(1).01-01 | See Exhibit F | | |
| | | | IA-05(1).01-02 | Control Enhancements: | IA-05(1).01-02 | See Exhibit F | | |
| | | | IA-05(1).01-03 | Control Enhancements: | IA-05(1).01-03 | See Exhibit F | | |
| | | | IA-05(1).01-04 | Control Enhancements: | IA-05(1).01-04 | See Exhibit F | | |
| | | | IA-05(1).01-05 | Control Enhancements: | IA-05(1).01-05 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | IA-05(2).01-00 | Control Enhancements: | IA-05(2).01-00 | See Exhibit F | | |
| | | | IA-05(2).01-01 | Control Enhancements: | IA-05(2).01-01 | See Exhibit F | | |
| | | | IA-05(2).01-02 | Control Enhancements: | IA-05(2).01-02 | See Exhibit F | | |
| | | | IA-05(2).01-03 | Control Enhancements: | IA-05(2).01-03 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | IA-05(3).01-00 | Control Enhancements: | IA-05(3).01-00 | See Exhibit F | | |
| | | | IA-05(4).01-00 | Control Enhancements: | IA-05(4).01-00 | See Exhibit F | | |
| | | | IA-05(5).01-00 | Control Enhancements: | IA-05(5).01-00 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |

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| | | | IA-05(6).01-00 | Control Enhancements: | IA-05(6).01-00 | See Exhibit F | | |
| | | | IA-05(7).01-00 | Control Enhancements: | IA-05(7).01-00 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | IA-05(8).01-00 | Control Enhancements: | IA-05(8).01-00 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | IA-06.01-00 | IA-6 AUTHENTICATOR FEEDBACK | IA-06.01-00 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | IA-07.01-00 | IA-7 CRYPTOGRAPHIC MODULE AUTHENTICATION | IA-07.01-00 | See Exhibit F | | |
| | | | IA-08.01-00 | IA-8 IDENTIFICATION AND AUTHENTICATION (NON- | IA-08.01-00 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| IR | | | IR-01.01-00 | IR-1 INCIDENT RESPONSE POLICY AND PROCEDURES | IR-01.01-00 | See Exhibit F | | |
| | | | IR-01.01-01 | | IR-01.01-01 | See Exhibit F | | |
| | | | IR-01.01-02 | | IR-01.01-02 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | IR-02.01-00 | IR-2 INCIDENT RESPONSE TRAINING | IR-02.01-00 | See Exhibit F | | |
| | | | IR-02.01-01 | | IR-02.01-01 | See Exhibit F | | |
| | | | IR-02.01-02 | | IR-02.01-02 | See Exhibit F | | |
| | | | | | | See Exhibit F | | |
| | | | IR-02(1).01-00 | Control Enhancements: | IR-02(1).01-00 | See Exhibit F | | |
| | | | IR-02(2).01-00 | Control Enhancements: | IR-02(2).01-00 | See Exhibit F | | |
| | | | IR-03.01-00 | IR-3 INCIDENT RESPONSE TESTING AND EXERCISES | IR-03.01-00 | See Exhibit F | | |
| | | | IR-03(1).01-00 | Control Enhancements: | IR-03(1).01-00 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | IR-04.01-00 | IR-4 INCIDENT HANDLING | IR-04.01-00 | See Exhibit F | | |
| | | | IR-04.01-01 | | IR-04.01-01 | See Exhibit F | | |
| | | | IR-04.01-02 | | IR-04.01-02 | See Exhibit F | | |
| | | | IR-04.01-03 | | IR-04.01-03 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | IR-04(1).01-00 | Control Enhancements: | IR-04(1).01-00 | See Exhibit F | | |
| | | | | | | See Exhibit F | | |
| | | | IR-04(2).01-00 | Control Enhancements: | IR-04(2).01-00 | See Exhibit F | | |
| | | | | | | See Exhibit F | | |
| | | | IR-04(3).01-00 | Control Enhancements: | IR-04(3).01-00 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |

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| | | | IR-04(4).01-00 | Control Enhancements: | IR-04(4).01-00 | See Exhibit F | | |
| | | | IR-04(5).01-00 | Control Enhancements: | IR-04(5).01-00 | See Exhibit F | | |
| | | | IR-05.01-00 | IR-5 INCIDENT MONITORING | IR-05.01-00 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | | | | See Exhibit F | | |
| | | | IR-05(1).01-00 | Control Enhancements: | IR-05(1).01-00 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | IR-06.01-00 | IR-6 INCIDENT REPORTING | IR-06.01-00 | See Exhibit F | | |
| | | | IR-06.01-01 | | IR-06.01-01 | See Exhibit F | | |
| | | | IR-06.01-02 | | IR-06.01-02 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | IR-06(1).01-00 | Control Enhancements: | IR-06(1).01-00 | See Exhibit F | | |
| | | | IR-06(2).01-00 | Control Enhancements: | IR-06(2).01-00 | See Exhibit F | | |
| | | | IR-07.01-00 | IR-7 INCIDENT RESPONSE ASSISTANCE | IR-07.01-00 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | | | | See Exhibit F | | |
| | | | IR-07(1).01-00 | Control Enhancements: | IR-07(1).01-00 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | IR-07(2).01-00 | Control Enhancements: | IR-07(2).01-00 | See Exhibit F | | |
| | | | IR-07(2).01-01 | Control Enhancements: | IR-07(2).01-01 | See Exhibit F | | |
| | | | IR-07(2).01-02 | Control Enhancements: | IR-07(2).01-02 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | IR-08.01-00 | IR-8 INCIDENT RESPONSE PLAN | IR-08.01-00 | See Exhibit F | | |
| | | | IR-08.01-01 | | IR-08.01-01 | See Exhibit F | | |
| | | | IR-08.01-02 | | IR-08.01-02 | See Exhibit F | | |
| | | | IR-08.01-03 | | IR-08.01-03 | See Exhibit F | | |
| | | | IR-08.01-04 | | IR-08.01-04 | See Exhibit F | | |
| | | | IR-08.01-05 | | IR-08.01-05 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| MA | | | MA-01.01-00 | MA-1 SYSTEM MAINTENANCE POLICY AND PROCEDURES | MA-01.01-00 | See Exhibit F | | |
| | | | MA-01.01-01 | | MA-01.01-01 | See Exhibit F | | |
| | | | MA-01.01-02 | | MA-01.01-02 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | MA-02.01-00 | MA-2 CONTROLLED MAINTENANCE | MA-02.01-00 | See Exhibit F | | |

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| | | | MA-02.01-01 | | MA-02.01-01 | See Exhibit F | | |
| | | | MA-02.01-02 | | MA-02.01-02 | See Exhibit F | | |
| | | | MA-02.01-03 | | MA-02.01-03 | See Exhibit F | | |
| | | | MA-02.01-04 | | MA-02.01-04 | See Exhibit F | | |
| | | | MA-02.01-05 | | MA-02.01-05 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | MA-02(1).01-00 | Control Enhancements: | MA-02(1).01-00 | See Exhibit F | | |
| | | | MA-02(1).01-01 | Control Enhancements: | MA-02(1).01-01 | See Exhibit F | | |
| | | | MA-02(1).01-02 | Control Enhancements: | MA-02(1).01-02 | See Exhibit F | | |
| | | | MA-02(1).01-03 | Control Enhancements: | MA-02(1).01-03 | See Exhibit F | | |
| | | | MA-02(1).01-04 | Control Enhancements: | MA-02(1).01-04 | See Exhibit F | | |
| | | | MA-02(1).01-05 | Control Enhancements: | MA-02(1).01-05 | See Exhibit F | | |
| | | | MA-02(2).01-00 | Control Enhancements: | MA-02(2).01-00 | See Exhibit F | | |
| | | | MA-03.01-00 | MA-3 MAINTENANCE TOOLS | MA-03.01-00 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | MA-03(1).01-00 | Control Enhancements: | MA-03(1).01-00 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | MA-03(2).01-00 | Control Enhancements: | MA-03(2).01-00 | See Exhibit F | | |
| | | | MA-03(3).01-00 | Control Enhancements: | MA-03(3).01-00 | See Exhibit F | | |
| | | | MA-03(4).01-00 | Control Enhancements: | MA-03(4).01-00 | See Exhibit F | | |
| | | | MA-04.01-00 | MA-4 NON-LOCAL MAINTENANCE | MA-04.01-00 | See Exhibit F | | |
| | | | MA-04.01-01 | | MA-04.01-01 | See Exhibit F | | |
| | | | MA-04.01-02 | | MA-04.01-02 | See Exhibit F | | |
| | | | MA-04.01-03 | | MA-04.01-03 | See Exhibit F | | |
| | | | MA-04.01-04 | | MA-04.01-04 | See Exhibit F | | |
| | | | MA-04.01-05 | | MA-04.01-05 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | MA-04(1).01-00 | Control Enhancements: | MA-04(1).01-00 | See Exhibit F | | |
| | | | MA-04(2).01-00 | Control Enhancements: | MA-04(2).01-00 | See Exhibit F | | |
| | | | MA-04(3).01-00 | Control Enhancements: | MA-04(3).01-00 | See Exhibit F | | |
| | | | MA-04(3).01-01 | Control Enhancements: | MA-04(3).01-01 | See Exhibit F | | |
| | | | MA-04(3).01-02 | Control Enhancements: | MA-04(3).01-02 | See Exhibit F | | |
| | | | MA-04(4).01-00 | Control Enhancements: | MA-04(4).01-00 | See Exhibit F | | |
| | | | MA-04(4).01-01 | Control Enhancements: | MA-04(4).01-01 | See Exhibit F | | |

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| | | | MA-04(4).01-02 | Control Enhancements: | MA-04(4).01-02 | See Exhibit F | | |
| | | | MA-04(5).01-00 | Control Enhancements: | MA-04(5).01-00 | See Exhibit F | | |
| | | | MA-04(5).01-01 | Control Enhancements: | MA-04(5).01-01 | See Exhibit F | | |
| | | | MA-04(5).01-02 | Control Enhancements: | MA-04(5).01-02 | See Exhibit F | | |
| | | | MA-04(6).01-00 | Control Enhancements: | MA-04(6).01-00 | See Exhibit F | | |
| | | | MA-04(7).01-00 | Control Enhancements: | MA-04(7).01-00 | See Exhibit F | | |
| | | | MA-05.01-00 | MA-5 MAINTENANCE PERSONNEL | MA-05.01-00 | See Exhibit F | | |
| | | | MA-05.01-01 | | MA-05.01-01 | See Exhibit F | | |
| | | | MA-05.01-02 | | MA-05.01-02 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | MA-05(1).01-00 | Control Enhancements: | MA-05(1).01-00 | See Exhibit F | | |
| | | | MA-05(1).01-01 | Control Enhancements: | MA-05(1).01-01 | See Exhibit F | | |
| | | | MA-05(1).01-02 | Control Enhancements: | MA-05(1).01-02 | See Exhibit F | | |
| | | | MA-05(1).01-03 | Control Enhancements: | MA-05(1).01-03 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | MA-05(2).01-00 | Control Enhancements: | MA-05(2).01-00 | See Exhibit F | | |
| | | | MA-05(3).01-00 | Control Enhancements: | MA-05(3).01-00 | See Exhibit F | | |
| | | | MA-05(4).01-00 | Control Enhancements: | MA-05(4).01-00 | See Exhibit F | | |
| | | | MA-05(4).01-01 | Control Enhancements: | MA-05(4).01-01 | See Exhibit F | | |
| | | | MA-05(4).01-02 | Control Enhancements: | MA-05(4).01-02 | See Exhibit F | | |
| | | | MA-06.01-00 | MA-6 TIMELY MAINTENANCE | MA-06.01-00 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| MP | | | MP-01.01-00 | MP-1 MEDIA PROTECTION POLICY AND PROCEDURES | MP-01.01-00 | See Exhibit F | | |
| | | | MP-01.01-01 | | MP-01.01-01 | See Exhibit F | | |
| | | | MP-01.01-02 | | MP-01.01-02 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | MP-02.01-00 | MP-2 MEDIA ACCESS | MP-02.01-00 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | MP-02(1).01-00 | Control Enhancements: | MP-02(1).01-00 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | MP-02(2).01-00 | | MP-02(2).01-00 | See Exhibit F | | |
| | | | MP-03.01-00 | MP-3 MEDIA MARKING | MP-03.01-00 | See Exhibit F | | |
| | | | MP-03.01-01 | | MP-03.01-01 | See Exhibit F | | |
| | | | MP-03.01-02 | | MP-03.01-02 | See Exhibit F | | |

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| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | MP-04.01-00 | MP-4 MEDIA STORAGE | MP-04.01-00 | See Exhibit F | | |
| | | | MP-04.01-01 | | MP-04.01-01 | See Exhibit F | | |
| | | | MP-04.01-02 | | MP-04.01-02 | See Exhibit F | | |
| | | | MP-04(1).01-00 | Control Enhancements: | MP-04(1).01-00 | See Exhibit F | | |
| | | | MP-05.01-00 | MP-5 MEDIA TRANSPORT | MP-05.01-00 | See Exhibit F | | |
| | | | MP-05.01-01 | | MP-05.01-01 | See Exhibit F | | |
| | | | MP-05.01-02 | | MP-05.01-02 | See Exhibit F | | |
| | | | MP-05.01-03 | | MP-05.01-03 | See Exhibit F | | |
| | | | | | | See Exhibit F | | |
| | | | MP-05(1).01-00 | Control Enhancements: | MP-05(1).01-00 | See Exhibit F | | |
| | | | MP-05(2).01-00 | Control Enhancements: | MP-05(2).01-00 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | MP-05(3).01-00 | Control Enhancements: | MP-05(3).01-00 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | MP-05(4).01-00 | Control Enhancements: | MP-05(4).01-00 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | MP-06.01-00 | MP-6 MEDIA SANITIZATION | MP-06.01-00 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | MP-06(1).01-00 | Control Enhancements: | MP-06(1).01-00 | See Exhibit F | | |
| | | | MP-06(2).01-00 | Control Enhancements: | MP-06(2).01-00 | See Exhibit F | | |
| | | | MP-06(3).01-00 | Control Enhancements: | MP-06(3).01-00 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | MP-06(4).01-00 | Control Enhancements: | MP-06(4).01-00 | See Exhibit F | | |
| | | | MP-06(5).01-00 | Control Enhancements: | MP-06(5).01-00 | See Exhibit F | | |
| | | | MP-06(6).01-00 | Control Enhancements: | MP-06(6).01-00 | See Exhibit F | | |
| PE | | | PE-01.01-00 | PE-1 PHYSICAL AND ENVIRONMENTAL PROTECTION | PE-01.01-00 | See Exhibit F | | |
| | | | PE-01.01-01 | | PE-01.01-01 | See Exhibit F | | |
| | | | PE-01.01-02 | | PE-01.01-02 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | PE-02.01-00 | PE-2 PHYSICAL ACCESS AUTHORIZATIONS | PE-02.01-00 | See Exhibit F | | |
| | | | PE-02.01-01 | | PE-02.01-01 | See Exhibit F | | |
| | | | PE-02.01-02 | | PE-02.01-02 | See Exhibit F | | |
| | | | PE-02.01-03 | | PE-02.01-03 | See Exhibit F | | |

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| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | PE-02(1).01-00 | Control Enhancements: | PE-02(1).01-00 | See Exhibit F | | |
| | | | PE-02(2).01-00 | Control Enhancements: | PE-02(2).01-00 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | PE-02(3).01-00 | Control Enhancements: | PE-02(3).01-00 | See Exhibit F | | |
| | | | PE-03.01-00 | PE-3 PHYSICAL ACCESS CONTROL | PE-03.01-00 | See Exhibit F | | |
| | | | PE-03.01-01 | | PE-03.01-01 | See Exhibit F | | |
| | | | PE-03.01-02 | | PE-03.01-02 | See Exhibit F | | |
| | | | PE-03.01-03 | | PE-03.01-03 | See Exhibit F | | |
| | | | PE-03.01-04 | | PE-03.01-04 | See Exhibit F | | |
| | | | PE-03.01-05 | | PE-03.01-05 | See Exhibit F | | |
| | | | PE-03.01-06 | | PE-03.01-06 | See Exhibit F | | |
| | | | PE-03.01-07 | | PE-03.01-07 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | PE-03(1).01-00 | Control Enhancements: | PE-03(1).01-00 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | PE-03(2).01-00 | Control Enhancements: | PE-03(2).01-00 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | PE-03(3).01-00 | Control Enhancements: | PE-03(3).01-00 | See Exhibit F | | |
| | | | PE-03(4).01-00 | Control Enhancements: | PE-03(4).01-00 | See Exhibit F | | |
| | | | PE-03(5).01-00 | Control Enhancements: | PE-03(5).01-00 | See Exhibit F | | |
| | | | PE-03(6).01-00 | Control Enhancements: | PE-03(6).01-00 | See Exhibit F | | |
| | | | PE-04.01-00 | PE-4 ACCESS CONTROL FOR TRANSMISSION MEDIUM | PE-04.01-00 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | PE-05.01-00 | PE-5 ACCESS CONTROL FOR OUTPUT DEVICES | PE-05.01-00 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | PE-06.01-00 | PE-6 MONITORING PHYSICAL ACCESS | PE-06.01-00 | See Exhibit F | | |
| | | | PE-06.01-01 | | PE-06.01-01 | See Exhibit F | | |
| | | | PE-06.01-02 | | PE-06.01-02 | See Exhibit F | | |
| | | | PE-06.01-03 | | PE-06.01-03 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | | | | See Exhibit F | | |
| | | | PE-06(1).01-00 | Control Enhancements: | PE-06(1).01-00 | See Exhibit F | | |
| | | | PE-06(2).01-00 | Control Enhancements: | PE-06(2).01-00 | See Exhibit F | | |

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| | | | PE-07.01-00 | PE-7 VISITOR CONTROL | PE-07.01-00 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | PE-07(1).01-00 | Control Enhancements: | PE-07(1).01-00 | See Exhibit F | | |
| | | | PE-07(2).01-00 | Control Enhancements: | PE-07(2).01-00 | See Exhibit F | | |
| | | | PE-08.01-00 | PE-8 ACCESS RECORDS | PE-08.01-00 | See Exhibit F | | |
| | | | PE-08.01-01 | | PE-08.01-01 | See Exhibit F | | |
| | | | PE-08.01-02 | | PE-08.01-02 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | PE-08(1).01-00 | Control Enhancements: | PE-08(1).01-00 | See Exhibit F | | |
| | | | PE-08(2).01-00 | Control Enhancements: | PE-08(2).01-00 | See Exhibit F | | |
| | | | PE-09.01-00 | PE-9 POWER EQUIPMENT AND POWER CABLING | PE-09.01-00 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | PE-09(1).01-00 | Control Enhancements: | PE-09(1).01-00 | See Exhibit F | | |
| | | | PE-09(2).01-00 | Control Enhancements: | PE-09(2).01-00 | See Exhibit F | | |
| | | | PE-10.01-00 | PE-10 EMERGENCY SHUTOFF | PE-10.01-00 | See Exhibit F | | |
| | | | PE-10.01-01 | | PE-10.01-01 | See Exhibit F | | |
| | | | PE-10.01-02 | | PE-10.01-02 | See Exhibit F | | |
| | | | PE-10.01-03 | | PE-10.01-03 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | PE-10(1).01-00 | Control Enhancements: | PE-10(1).01-00 | See Exhibit F | | |
| | | | PE-11.01-00 | PE-11 EMERGENCY POWER | PE-11.01-00 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | PE-11(1).01-01 | Control Enhancements: | PE-11(1).01-01 | See Exhibit F | | |
| | | | PE-11(1).01-02 | Control Enhancements: | PE-11(1).01-02 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | PE-12.01-00 | PE-12 EMERGENCY LIGHTING | PE-12.01-00 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | PE-12(1).01-00 | Control Enhancements: | PE-12(1).01-00 | See Exhibit F | | |
| | | | PE-13.01-00 | PE-13 FIRE PROTECTION | PE-13.01-00 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | PE-13(1).01-00 | Control Enhancements: | PE-13(1).01-00 | See Exhibit F | | |
| | | | PE-13(2).01-00 | Control Enhancements: | PE-13(2).01-00 | See Exhibit F | | |
| | | | PE-13(3).01-00 | Control Enhancements: | PE-13(3).01-00 | See Exhibit F | | |
| | | | PE-13(4).01-00 | Control Enhancements: | PE-13(4).01-00 | See Exhibit F | | |

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| | | | PE-14.01-00 | PE-14 TEMPERATURE AND HUMIDITY CONTROLS | PE-14.01-00 | See Exhibit F | | |
| | | | PE-14.01-01 | | PE-14.01-01 | See Exhibit F | | |
| | | | PE-14.01-02 | | PE-14.01-02 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | PE-14(1).01-01 | Control Enhancements: | PE-14(1).01-01 | See Exhibit F | | |
| | | | PE-14(2).01-02 | Control Enhancements: | PE-14(2).01-02 | See Exhibit F | | |
| | | | PE-15.01-00 | PE-15 WATER DAMAGE PROTECTION | PE-15.01-00 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | PE-15(1).01-00 | Control Enhancements: | PE-15(1).01-00 | See Exhibit F | | |
| | | | PE-16.01-00 | PE-16 DELIVERY AND REMOVAL | PE-16.01-00 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | PE-17.01-00 | PE-17 ALTERNATE WORK SITE | PE-17.01-00 | See Exhibit F | | |
| | | | PE-17.01-01 | | PE-17.01-01 | See Exhibit F | | |
| | | | PE-17.01-02 | | PE-17.01-02 | See Exhibit F | | |
| | | | PE-17.01-03 | | PE-17.01-03 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | PE-18.01-00 | PE-18 LOCATION OF INFORMATION SYSTEM | PE-18.01-00 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | PE-18(1).01-00 | Control Enhancements: | PE-18(1).01-00 | See Exhibit F | | |
| | | | PE-19.01-00 | PE-19 INFORMATION LEAKAGE | PE-19.01-00 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | | | | See Exhibit F | | |
| | | | PE-19(1).01-00 | Control Enhancements: | PE-19(1).01-00 | See Exhibit F | | |
| PL | | | PL-01.01-00 | PL-1 SECURITY PLANNING POLICY AND PROCEDURES | PL-01.01-00 | See Exhibit F | | |
| | | | PL-01.01-01 | | PL-01.01-01 | See Exhibit F | | |
| | | | PL-01.01-02 | | PL-01.01-02 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | PL-02.01-00 | PL-2 SYSTEM SECURITY PLAN | PL-02.01-00 | See Exhibit F | | |
| | | | PL-02.01-00 | | PL-02.01-00 | See Exhibit F | | |
| | | | PL-02.01-01 | | PL-02.01-01 | See Exhibit F | | |
| | | | PL-02.01-02 | | PL-02.01-02 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | | | | See Exhibit F | | |
| | | | PL-02(1).01-00 | Control Enhancements: | PL-02(1).01-00 | See Exhibit F | | |

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| | | | PL-02(1).01-01 | Control Enhancements: | PL-02(1).01-01 | See Exhibit F | | |
| | | | PL-02(1).01-02 | Control Enhancements: | PL-02(1).01-02 | See Exhibit F | | |
| | | | | | | See Exhibit F | | |
| | | | PL-02(2).01-00 | Control Enhancements: | PL-02(2).01-00 | See Exhibit F | | |
| | | | PL-02(2).01-01 | Control Enhancements: | PL-02(2).01-01 | See Exhibit F | | |
| | | | PL-02(2).01-02 | Control Enhancements: | PL-02(2).01-02 | See Exhibit F | | |
| | | | PL-02(2).01-03 | Control Enhancements: | PL-02(2).01-03 | See Exhibit F | | |
| | | | PL-02(2).01-04 | Control Enhancements: | PL-02(2).01-04 | See Exhibit F | | |
| | | | PL-02(2).01-05 | Control Enhancements: | PL-02(2).01-05 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | PL-03.01-00 | PL-3 SYSTEM SECURITY PLAN UPDATE | PL-03.01-00 | See Exhibit F | | |
| | | | PL-04.01-00 | PL-4 RULES OF BEHAVIOR | PL-04.01-00 | See Exhibit F | | |
| | | | PL-04.01-01 | | PL-04.01-01 | See Exhibit F | | |
| | | | PL-04.01-02 | | PL-04.01-02 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | PL-04(1).01-00 | Control Enhancements: | PL-04(1).01-00 | See Exhibit F | | |
| | | | PL-05.01-00 | PL-5 PRIVACY IMPACT ASSESSMENT | PL-05.01-00 | See Exhibit F | | |
| | | | PL-06.01-00 | PL-6 SECURITY-RELATED ACTIVITY PLANNING | PL-06.01-00 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | PS-01.01-00 | PS-1 PERSONNEL SECURITY POLICY AND PROCEDURES | PS-01.01-00 | See Exhibit F | | |
| | | | PS-01.01-01 | | PS-01.01-01 | See Exhibit F | | |
| | | | PS-01.01-02 | | PS-01.01-02 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| PS | | | PS-02.01-00 | PS-2 POSITION CATEGORIZATION | PS-02.01-00 | See Exhibit F | | |
| | | | PS-02.01-01 | | PS-02.01-01 | See Exhibit F | | |
| | | | PS-02.01-02 | | PS-02.01-02 | See Exhibit F | | |
| | | | PS-02.01-03 | | PS-02.01-03 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | PS-03.01-00 | PS-3 PERSONNEL SCREENING | PS-03.01-00 | See Exhibit F | | |
| | | | PS-03.01-01 | | PS-03.01-01 | See Exhibit F | | |
| | | | PS-03.01-02 | | PS-03.01-02 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | PS-03(1).01-00 | Control Enhancements: | PS-03(1).01-00 | See Exhibit F | | |
| | | | PS-03(2).01-00 | Control Enhancements: | PS-03(2).01-00 | See Exhibit F | | |

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| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | PS-04.01-00 | PS-4 PERSONNEL TERMINATION | PS-04.01-00 | See Exhibit F | | |
| | | | PS-04.01-01 | | PS-04.01-01 | See Exhibit F | | |
| | | | PS-04.01-02 | | PS-04.01-02 | See Exhibit F | | |
| | | | PS-04.01-03 | | PS-04.01-03 | See Exhibit F | | |
| | | | PS-04.01-04 | | PS-04.01-04 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | PS-05.01-00 | PS-5 PERSONNEL TRANSFER | PS-05.01-00 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | PS-06.01-00 | PS-6 ACCESS AGREEMENTS | PS-06.01-00 | See Exhibit F | | |
| | | | PS-06.01-01 | | PS-06.01-01 | See Exhibit F | | |
| | | | PS-06.01-02 | | PS-06.01-02 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | | | | See Exhibit F | | |
| | | | PS-06(1).01-00 | Control Enhancements: | PS-06(1).01-00 | See Exhibit F | | |
| | | | PS-06(1).01-01 | Control Enhancements: | PS-06(1).01-01 | See Exhibit F | | |
| | | | PS-06(1).01-02 | Control Enhancements: | PS-06(1).01-02 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | PS-06(2).01-00 | Control Enhancements: | PS-06(2).01-00 | See Exhibit F | | |
| | | | PS-06(2).01-01 | Control Enhancements: | PS-06(2).01-01 | See Exhibit F | | |
| | | | PS-06(2).01-02 | Control Enhancements: | PS-06(2).01-02 | See Exhibit F | | |
| | | | PS-06(2).01-03 | Control Enhancements: | PS-06(2).01-03 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | PS-07.01-00 | PS-7 THIRD-PARTY PERSONNEL SECURITY | PS-07.01-00 | See Exhibit F | | |
| | | | PS-07.01-01 | | PS-07.01-01 | See Exhibit F | | |
| | | | PS-07.01-02 | | PS-07.01-02 | See Exhibit F | | |
| | | | PS-07.01-03 | | PS-07.01-03 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | PS-08.01-00 | PS-8 PERSONNEL SANCTIONS | PS-08.01-00 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | RA-01.01-00 | RA-1 RISK ASSESSMENT POLICY AND PROCEDURES | RA-01.01-00 | See Exhibit F | | |
| | | | RA-01.01-01 | | RA-01.01-01 | See Exhibit F | | |
| | | | RA-01.01-02 | | RA-01.01-02 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |

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| RA | | | RA-02.01-00 | RA-2 SECURITY CATEGORIZATION | RA-02.01-00 | See Exhibit F | | |
| | | | RA-02.01-01 | | RA-02.01-01 | See Exhibit F | | |
| | | | RA-02.01-02 | | RA-02.01-02 | See Exhibit F | | |
| | | | RA-02.01-03 | | RA-02.01-03 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | RA-03.01-00 | RA-3 RISK ASSESSMENT | RA-03.01-00 | See Exhibit F | | |
| | | | RA-03.01-01 | | RA-03.01-01 | See Exhibit F | | |
| | | | RA-03.01-02 | | RA-03.01-02 | See Exhibit F | | |
| | | | RA-03.01-03 | | RA-03.01-03 | See Exhibit F | | |
| | | | RA-03.01-04 | | RA-03.01-04 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | RA-04.01-00 | RA-4 RISK ASSESSMENT UPDATE | RA-04.01-00 | See Exhibit F | | |
| | | | RA-05.01-00 | RA-5 VULNERABILITY SCANNING | RA-05.01-00 | See Exhibit F | | |
| | | | RA-05.01-01 | | RA-05.01-01 | See Exhibit F | | |
| | | | RA-05.01-02 | | RA-05.01-02 | See Exhibit F | | |
| | | | RA-05.01-03 | | RA-05.01-03 | See Exhibit F | | |
| | | | RA-05.01-04 | | RA-05.01-04 | See Exhibit F | | |
| | | | RA-05.01-05 | | RA-05.01-05 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | | | | See Exhibit F | | |
| | | | RA-05(1).01-00 | Control Enhancements: | RA-05(1).01-00 | See Exhibit F | | |
| | | | RA-05(2).01-00 | Control Enhancements: | RA-05(2).01-00 | See Exhibit F | | |
| | | | RA-05(3).01-00 | Control Enhancements: | RA-05(3).01-00 | See Exhibit F | | |
| | | | RA-05(4).01-00 | Control Enhancements: | RA-05(4).01-00 | See Exhibit F | | |
| | | | RA-05(5).01-00 | Control Enhancements: | RA-05(5).01-00 | See Exhibit F | | |
| | | | RA-05(6).01-00 | Control Enhancements: | RA-05(6).01-00 | See Exhibit F | | |
| | | | RA-05(7).01-00 | Control Enhancements: | RA-05(7).01-00 | See Exhibit F | | |
| | | | RA-05(8).01-00 | Control Enhancements: | RA-05(8).01-00 | See Exhibit F | | |
| | | | RA-05(9).01-00 | Control Enhancements: | RA-05(9).01-00 | See Exhibit F | | |
| | | | RA-05(9).01-00 | Control Enhancements: | RA-05(9).01-00 | See Exhibit F | | |
| | | | RA-05(9).01-00 | Control Enhancements: | RA-05(9).01-00 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| SA | | | SA-01.01-00 | SA-1 SYSTEM AND SERVICES ACQUISITION POLICY AND | SA-01.01-00 | See Exhibit F | | |
| | | | SA-01.01-01 | | SA-01.01-01 | See Exhibit F | | |

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| | | | SA-01.01-02 | | SA-01.01-02 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | SA-02.01-00 | SA-2 ALLOCATION OF RESOURCES | SA-02.01-00 | See Exhibit F | | |
| | | | SA-02.01-01 | | SA-02.01-01 | See Exhibit F | | |
| | | | SA-02.01-02 | | SA-02.01-02 | See Exhibit F | | |
| | | | SA-02.01-03 | | SA-02.01-03 | See Exhibit F | | |
| | | | SA-03.01-00 | SA-3 LIFE CYCLE SUPPORT | SA-03.01-00 | See Exhibit F | | |
| | | | SA-03.01-01 | | SA-03.01-01 | See Exhibit F | | |
| | | | SA-03.01-02 | | SA-03.01-02 | See Exhibit F | | |
| | | | SA-03.01-03 | | SA-03.01-03 | See Exhibit F | | |
| | | | SA-04.01-00 | SA-4 ACQUISITIONS | SA-04.01-00 | See Exhibit F | | |
| | | | SA-04.01-01 | | SA-04.01-01 | See Exhibit F | | |
| | | | SA-04.01-02 | | SA-04.01-02 | See Exhibit F | | |
| | | | SA-04.01-03 | | SA-04.01-03 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | SA-04(1).01-00 | Control Enhancements: | SA-04(1).01-00 | See Exhibit F | | |
| | | | SA-04(2).01-00 | Control Enhancements: | SA-04(2).01-00 | See Exhibit F | | |
| | | | SA-04(3).01-00 | Control Enhancements: | SA-04(3).01-00 | See Exhibit F | | |
| | | | SA-04(4).01-00 | Control Enhancements: | SA-04(4).01-00 | See Exhibit F | | |
| | | | SA-04(5).01-00 | Control Enhancements: | SA-04(5).01-00 | See Exhibit F | | |
| | | | SA-04(6).01-00 | Control Enhancements: | SA-04(6).01-00 | See Exhibit F | | |
| | | | SA-04(6).01-01 | Control Enhancements: | SA-04(6).01-01 | See Exhibit F | | |
| | | | SA-04(6).01-02 | Control Enhancements: | SA-04(6).01-02 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | SA-04(7).01-00 | Control Enhancements: | SA-04(7).01-00 | See Exhibit F | | |
| | | | SA-04(7).01-01 | Control Enhancements: | SA-04(7).01-01 | See Exhibit F | | |
| | | | SA-04(7).01-02 | Control Enhancements: | SA-04(7).01-02 | See Exhibit F | | |
| | | | SA-05.01-00 | SA-5 INFORMATION SYSTEM DOCUMENTATION | SA-05.01-00 | See Exhibit F | | |
| | | | SA-05.01-01 | | SA-05.01-01 | See Exhibit F | | |
| | | | SA-05.01-02 | | SA-05.01-02 | See Exhibit F | | |
| | | | SA-05.01-03 | | SA-05.01-03 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | | | | See Exhibit F | | |
| | | | SA-05(1).01-00 | Control Enhancements: | SA-05(1).01-00 | See Exhibit F | | |

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| | | | SA-05(2).01-00 | Control Enhancements: | SA-05(2).01-00 | See Exhibit F | | |
| | | | SA-05(3).01-00 | Control Enhancements: | SA-05(3).01-00 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | SA-05(4).01-00 | Control Enhancements: | SA-05(4).01-00 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | SA-05(5).01-00 | Control Enhancements: | SA-05(5).01-00 | See Exhibit F | | |
| | | | SA-06.01-00 | SA-6 SOFTWARE USAGE RESTRICTIONS | SA-06.01-00 | See Exhibit F | | |
| | | | SA-06.01-01 | | SA-06.01-01 | See Exhibit F | | |
| | | | SA-06.01-02 | | SA-06.01-02 | See Exhibit F | | |
| | | | SA-06.01-03 | | SA-06.01-03 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | SA-06(1).01-00 | Control Enhancements: | SA-06(1).01-00 | See Exhibit F | | |
| | | | SA-06(1).01-01 | | SA-06(1).01-01 | See Exhibit F | | |
| | | | SA-06(1).01-02 | | SA-06(1).01-02 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | SA-07.01-00 | SA-7 USER-INSTALLED SOFTWARE | SA-07.01-00 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | SA-08.01-00 | SA-8 SECURITY ENGINEERING PRINCIPLES | SA-08.01-00 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | SA-09.01-00 | SA-9 EXTERNAL INFORMATION SYSTEM SERVICES | SA-09.01-00 | See Exhibit F | | |
| | | | SA-09.01-01 | | SA-09.01-01 | See Exhibit F | | |
| | | | SA-09.01-02 | | SA-09.01-02 | See Exhibit F | | |
| | | | SA-09.01-03 | | SA-09.01-03 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | SA-09(1).01-00 | Control Enhancements: | SA-09(1).01-00 | See Exhibit F | | |
| | | | SA-09(1).01-01 | Control Enhancements: | SA-09(1).01-01 | See Exhibit F | | |
| | | | SA-09(1).01-02 | Control Enhancements: | SA-09(1).01-02 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | SA-10.01-00 | SA-10 DEVELOPER CONFIGURATION MANAGEMENT | SA-10.01-00 | See Exhibit F | | |
| | | | SA-10.01-01 | | SA-10.01-01 | See Exhibit F | | |
| | | | SA-10.01-02 | | SA-10.01-02 | See Exhibit F | | |
| | | | SA-10.01-03 | | SA-10.01-03 | See Exhibit F | | |
| | | | SA-10.01-04 | | SA-10.01-04 | See Exhibit F | | |
| | | | SA-10.01-05 | | SA-10.01-05 | See Exhibit F | | |

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| | | | | | | See Exhibit F | | |
| | | | SA-10(1).01-00 | Control Enhancements: | SA-10(1).01-00 | See Exhibit F | | |
| | | | SA-10(2).01-00 | Control Enhancements: | SA-10(2).01-00 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | SA-11.01-00 | SA-11 DEVELOPER SECURITY TESTING | SA-11.01-00 | See Exhibit F | | |
| | | | SA-11.01-01 | | SA-11.01-01 | See Exhibit F | | |
| | | | SA-11.01-02 | | SA-11.01-02 | See Exhibit F | | |
| | | | SA-11.01-03 | | SA-11.01-03 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | SA-11(1).01-00 | Control Enhancements: | SA-11(1).01-00 | See Exhibit F | | |
| | | | SA-11(2).01-00 | Control Enhancements: | SA-11(2).01-00 | See Exhibit F | | |
| | | | SA-11(3).01-00 | Control Enhancements: | SA-11(3).01-00 | See Exhibit F | | |
| | | | SA-12.01-00 | SA-12 SUPPLY CHAIN PROTECTION | SA-12.01-00 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | SA-12(1).01-00 | Control Enhancements: | SA-12(1).01-00 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | SA-12(2).01-00 | Control Enhancements: | SA-12(2).01-00 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | SA-12(3).01-00 | Control Enhancements: | SA-12(3).01-00 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | SA-12(4).01-00 | Control Enhancements: | SA-12(4).01-00 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | SA-12(5).01-00 | Control Enhancements: | SA-12(5).01-00 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | SA-12(6).01-00 | Control Enhancements: | SA-12(6).01-00 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | SA-12(7).01-00 | Control Enhancements: | SA-12(7).01-00 | See Exhibit F | | |
| | | | SA-13.01-00 | SA-13 TRUSTWORTHINESS | SA-13.01-00 | See Exhibit F | | |
| | | | SA-14.01-00 | SA-14 CRITICAL INFORMATION SYSTEM COMPONENTS | SA-14.01-00 | See Exhibit F | | |
| | | | SA-14.01-01 | | SA-14.01-01 | See Exhibit F | | |
| | | | SA-14.01-02 | | SA-14.01-02 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | SA-14(1).01-00 | Control Enhancements: | SA-14(1).01-00 | See Exhibit F | | |
| | | | SA-14(1).01-01 | Control Enhancements: | SA-14(1).01-01 | See Exhibit F | | |

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| | | | SA-14(1).01-02 | Control Enhancements: | SA-14(1).01-02 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| SC | | | SC-01.01-00 | SC-1 SYSTEM AND COMMUNICATIONS PROTECTION | SC-01.01-00 | See Exhibit F | | |
| | | | SC-01.01-01 | | SC-01.01-01 | See Exhibit F | | |
| | | | SC-01.01-02 | | SC-01.01-02 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | SC-02.01-00 | SC-2 APPLICATION PARTITIONING | SC-02.01-00 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | SC-02(1).01-00 | Control Enhancements: | SC-02(1).01-00 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | SC-03.01-00 | SC-3 SECURITY FUNCTION ISOLATION | SC-03.01-00 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | SC-03(1).01-00 | Control Enhancements: | SC-03(1).01-00 | See Exhibit F | | |
| | | | SC-03(2).01-00 | Control Enhancements: | SC-03(2).01-00 | See Exhibit F | | |
| | | | SC-03(3).01-00 | Control Enhancements: | SC-03(3).01-00 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | SC-03(4).01-00 | | SC-03(4).01-00 | See Exhibit F | | |
| | | | SC-03(5).01-00 | | SC-03(5).01-00 | See Exhibit F | | |
| | | | SC-04.01-00 | SC-4 INFORMATION IN SHARED RESOURCES | SC-04.01-00 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | SC-04(1).01-00 | Control Enhancements: | SC-04(1).01-00 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | SC-05.01-00 | SC-5 DENIAL OF SERVICE PROTECTION | SC-05.01-00 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | SC-05(1).01-00 | Control Enhancements: | SC-05(1).01-00 | See Exhibit F | | |
| | | | SC-05(2).01-00 | Control Enhancements: | SC-05(2).01-00 | See Exhibit F | | |
| | | | SC-06.01-00 | SC-6 RESOURCE PRIORITY | SC-06.01-00 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | SC-07.01-00 | SC-7 BOUNDARY PROTECTION | SC-07.01-00 | See Exhibit F | | |
| | | | SC-07.01-01 | | SC-07.01-01 | See Exhibit F | | |
| | | | SC-07.01-02 | | SC-07.01-02 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | SC-07(1).01-00 | Control Enhancements: | SC-07(1).01-00 | See Exhibit F | | |

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| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | SC-07(2).01-00 | Control Enhancements: | SC-07(2).01-00 | See Exhibit F | | |
| | | | SC-07(3).01-00 | Control Enhancements: | SC-07(3).01-00 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | SC-07(4).01-00 | Control Enhancements: | SC-07(4).01-00 | See Exhibit F | | |
| | | | SC-07(4).01-01 | Control Enhancements: | SC-07(4).01-01 | See Exhibit F | | |
| | | | SC-07(4).01-02 | Control Enhancements: | SC-07(4).01-02 | See Exhibit F | | |
| | | | SC-07(4).01-03 | Control Enhancements: | SC-07(4).01-03 | See Exhibit F | | |
| | | | SC-07(4).01-04 | Control Enhancements: | SC-07(4).01-04 | See Exhibit F | | |
| | | | SC-07(4).01-05 | Control Enhancements: | SC-07(4).01-05 | See Exhibit F | | |
| | | | SC-07(4).01-06 | Control Enhancements: | SC-07(4).01-06 | See Exhibit F | | |
| | | | SC-07(5).01-00 | Control Enhancements: | SC-07(5).01-00 | See Exhibit F | | |
| | | | SC-07(6).01-00 | Control Enhancements: | SC-07(6).01-00 | See Exhibit F | | |
| | | | SC-07(7).01-00 | Control Enhancements: | SC-07(7).01-00 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | SC-07(8).01-00 | Control Enhancements: | SC-07(8).01-00 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | SC-07(9).01-00 | Control Enhancements: | SC-07(9).01-00 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | SC-07(10).01-00 | Control Enhancements: | SC-07(10).01-00 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | SC-07(11).01-00 | Control Enhancements: | SC-07(11).01-00 | See Exhibit F | | |
| | | | SC-07(12).01-00 | Control Enhancements: | SC-07(12).01-00 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | SC-07(13).01-00 | Control Enhancements: | SC-07(13).01-00 | See Exhibit F | | |
| | | | SC-07(14).01-00 | Control Enhancements: | SC-07(14).01-00 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | SC-07(15).01-00 | Control Enhancements: | SC-07(15).01-00 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | SC-07(16).01-00 | Control Enhancements: | SC-07(16).01-00 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | SC-07(17).01-00 | Control Enhancements: | SC-07(17).01-00 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | SC-07(18).01-00 | Control Enhancements: | SC-07(18).01-00 | See Exhibit F | | |

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| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | SC-08.01-00 | SC-8 TRANSMISSION INTEGRITY | SC-08.01-00 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | SC-08(1).01-00 | Control Enhancements: | SC-08(1).01-00 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | SC-08(2).01-00 | Control Enhancements: | SC-08(2).01-00 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | SC-09.01-00 | SC-9 TRANSMISSION CONFIDENTIALITY | SC-09.01-00 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | SC-09(1).01-00 | Control Enhancements: | SC-09(1).01-00 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | SC-09(2).01-00 | | SC-09(2).01-00 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | SC-10.01-00 | SC-10 NETWORK DISCONNECT | SC-10.01-00 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | SC-11.01-00 | SC-11 TRUSTED PATH | SC-11.01-00 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | SC-12.01-00 | SC-12 CRYPTOGRAPHIC KEY ESTABLISHMENT AND | SC-12.01-00 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | | | | See Exhibit F | | |
| | | | SC-12(1).01-00 | Control Enhancements: | SC-12(1).01-00 | See Exhibit F | | |
| | | | SC-12(2).01-00 | Control Enhancements: | SC-12(2).01-00 | See Exhibit F | | |
| | | | SC-12(3).01-00 | Control Enhancements: | SC-12(3).01-00 | See Exhibit F | | |
| | | | SC-12(4).01-00 | Control Enhancements: | SC-12(4).01-00 | See Exhibit F | | |
| | | | SC-12(5).01-00 | Control Enhancements: | SC-12(5).01-00 | See Exhibit F | | |
| | | | SC-13.01-00 | SC-13 USE OF CRYPTOGRAPHY | SC-13.01-00 | See Exhibit F | | |
| | | | SC-13(1).01-00 | Control Enhancements: | SC-13(1).01-00 | See Exhibit F | | |
| | | | SC-13(2).01-00 | Control Enhancements: | SC-13(2).01-00 | See Exhibit F | | |
| | | | SC-13(3).01-00 | Control Enhancements: | SC-13(3).01-00 | See Exhibit F | | |
| | | | SC-13(4).01-00 | Control Enhancements: | SC-13(4).01-00 | See Exhibit F | | |
| | | | SC-14.01-00 | SC-14 PUBLIC ACCESS PROTECTIONS | SC-14.01-00 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | SC-15.01-00 | SC-15 COLLABORATIVE COMPUTING DEVICES | SC-15.01-00 | See Exhibit F | | |
| | | | SC-15.01-00 | | SC-15.01-00 | See Exhibit F | | |

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| | | | SC-15.01-00 | | SC-15.01-00 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | SC-15(1).01-00 | Control Enhancements: | SC-15(1).01-00 | See Exhibit F | | |
| | | | SC-15(2).01-00 | Control Enhancements: | SC-15(2).01-00 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | SC-15(3).01-00 | Control Enhancements: | SC-15(3).01-00 | See Exhibit F | | |
| | | | SC-16.01-00 | SC-16 TRANSMISSION OF SECURITY ATTRIBUTES | SC-16.01-00 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | | | | See Exhibit F | | |
| | | | SC-16(1).01-00 | Control Enhancements: | SC-16(1).01-00 | See Exhibit F | | |
| | | | SC-17.01-00 | SC-17 PUBLIC KEY INFRASTRUCTURE CERTIFICATES | SC-17.01-00 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | SC-18.01-00 | SC-18 MOBILE CODE | SC-18.01-00 | See Exhibit F | | |
| | | | SC-18.01-01 | | SC-18.01-01 | See Exhibit F | | |
| | | | SC-18.01-02 | | SC-18.01-02 | See Exhibit F | | |
| | | | SC-18.01-03 | | SC-18.01-03 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | SC-18(1).01-00 | Control Enhancements: | SC-18(1).01-00 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | SC-18(2).01-00 | | SC-18(2).01-00 | See Exhibit F | | |
| | | | SC-18(3).01-00 | | SC-18(3).01-00 | See Exhibit F | | |
| | | | SC-18(4).01-00 | | SC-18(4).01-00 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | SC-19.01-00 | SC-19 VOICE OVER INTERNET PROTOCOL | SC-19.01-00 | See Exhibit F | | |
| | | | SC-19.01-01 | | SC-19.01-01 | See Exhibit F | | |
| | | | SC-19.01-02 | | SC-19.01-02 | See Exhibit F | | |
| | | | SC-20.01-00 | SC-20 SECURE NAME / ADDRESS RESOLUTION SERVICE | SC-20.01-00 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | | | | See Exhibit F | | |
| | | | SC-20(1).01-00 | Control Enhancements: | SC-20(1).01-00 | See Exhibit F | | |
| | | | | | | See Exhibit F | | |
| | | | | | | See Exhibit F | | |
| | | | SC-21.01-00 | SC-21 SECURE NAME / ADDRESS RESOLUTION SERVICE | SC-21.01-00 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |

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| | | | | | | See Exhibit F | | |
| | | | SC-21(1).01-00 | Control Enhancements: | SC-21(1).01-00 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | SC-22.01-00 | SC-22 ARCHITECTURE AND PROVISIONING FOR NAME / | SC-22.01-00 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | SC-23.01-00 | SC-23 SESSION AUTHENTICITY | SC-23.01-00 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | SC-23(1).01-00 | Control Enhancements: | SC-23(1).01-00 | See Exhibit F | | |
| | | | SC-23(2).01-00 | Control Enhancements: | SC-23(2).01-00 | See Exhibit F | | |
| | | | SC-23(3).01-00 | Control Enhancements: | SC-23(3).01-00 | See Exhibit F | | |
| | | | SC-23(4).01-00 | Control Enhancements: | SC-23(4).01-00 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | SC-24.01-00 | SC-24 FAIL IN KNOWN STATE | SC-24.01-00 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | SC-25.01-00 | SC-25 THIN NODES | SC-25.01-00 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | SC-26.01-00 | SC-26 HONEYPOTS | SC-26.01-00 | See Exhibit F | | |
| | | | SC-26(1).01-00 | | SC-26(1).01-00 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | SC-27.01-00 | SC-27 OPERATING SYSTEM-INDEPENDENT APPLICATIONS | SC-27.01-00 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | SC-28.01-00 | SC-28 PROTECTION OF INFORMATION AT REST | SC-28.01-00 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | SC-28(1).01-00 | Control Enhancements: | SC-28(1).01-00 | See Exhibit F | | |
| | | | SC-29.01-00 | SC-29 HETEROGENEITY | SC-29.01-00 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | SC-30.01-00 | SC-30 VIRTUALIZATION TECHNIQUES | SC-30.01-00 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | SC-30(1).01-00 | Control Enhancements: | SC-30(1).01-00 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | SC-30(2).01-00 | Control Enhancements: | SC-30(2).01-00 | See Exhibit F | | |
| | | | SC-31.01-00 | SC-31 COVERT CHANNEL ANALYSIS | SC-31.01-00 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | SC-31(1).01-00 | Control Enhancements: | SC-31(1).01-00 | See Exhibit F | | |

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| | | | SC-32.01-00 | SC-32 INFORMATION SYSTEM PARTITIONING | SC-32.01-00 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | SC-33.01-00 | SC-33 TRANSMISSION PREPARATION INTEGRITY | SC-33.01-00 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | SC-34.01-00 | SC-34 NON-MODIFIABLE EXECUTABLE PROGRAMS | SC-34.01-00 | See Exhibit F | | |
| | | | SC-34.01-01 | | SC-34.01-01 | See Exhibit F | | |
| | | | SC-34.01-02 | | SC-34.01-02 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | SC-34(1).01-00 | Control Enhancements: | SC-34(1).01-00 | See Exhibit F | | |
| | | | | | | See Exhibit F | | |
| | | | SC-34(2).01-00 | Control Enhancements: | SC-34(2).01-00 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| SI | | | SI-01.01-00 | SI-1 SYSTEM AND INFORMATION INTEGRITY POLICY AND | SI-01.01-00 | See Exhibit F | | |
| | | | SI-01.01-01 | | SI-01.01-01 | See Exhibit F | | |
| | | | SI-01.01-02 | | SI-01.01-02 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | SI-02.01-00 | SI-2 FLAW REMEDIATION | SI-02.01-00 | See Exhibit F | | |
| | | | SI-02.01-01 | | SI-02.01-01 | See Exhibit F | | |
| | | | SI-02.01-02 | | SI-02.01-02 | See Exhibit F | | |
| | | | SI-02.01-03 | | SI-02.01-03 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | | | | See Exhibit F | | |
| | | | SI-02(1).01-00 | Control Enhancements: | SI-02(1).01-00 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | SI-02(2).01-00 | Control Enhancements: | SI-02(2).01-00 | See Exhibit F | | |
| | | | SI-02(3).01-00 | Control Enhancements: | SI-02(3).01-00 | See Exhibit F | | |
| | | | SI-02(4).01-00 | Control Enhancements: | SI-02(4).01-00 | See Exhibit F | | |
| | | | SI-03.01-00 | SI-3 MALICIOUS CODE PROTECTION | SI-03.01-00 | See Exhibit F | | |
| | | | SI-03.01-01 | | SI-03.01-01 | See Exhibit F | | |
| | | | SI-03.01-02 | | SI-03.01-02 | See Exhibit F | | |
| | | | SI-03.01-03 | | SI-03.01-03 | See Exhibit F | | |
| | | | SI-03.01-04 | | SI-03.01-04 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | SI-03(1).01-00 | Control Enhancements: | SI-03(1).01-00 | See Exhibit F | | |

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| | | | SI-03(2).01-00 | Control Enhancements: | SI-03(2).01-00 | See Exhibit F | | |
| | | | SI-03(3).01-00 | Control Enhancements: | SI-03(3).01-00 | See Exhibit F | | |
| | | | SI-03(4).01-00 | Control Enhancements: | SI-03(4).01-00 | See Exhibit F | | |
| | | | SI-03(5).01-00 | Control Enhancements: | SI-03(5).01-00 | See Exhibit F | | |
| | | | SI-03(6).01-00 | Control Enhancements: | SI-03(6).01-00 | See Exhibit F | | |
| | | | SI-04.01-00 | SI-4 INFORMATION SYSTEM MONITORING | SI-04.01-00 | See Exhibit F | | |
| | | | SI-04.01-01 | | SI-04.01-01 | See Exhibit F | | |
| | | | SI-04.01-02 | | SI-04.01-02 | See Exhibit F | | |
| | | | SI-04.01-03 | | SI-04.01-03 | See Exhibit F | | |
| | | | SI-04.01-04 | | SI-04.01-04 | See Exhibit F | | |
| | | | SI-04.01-05 | | SI-04.01-05 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | SI-04(1).01-00 | Control Enhancements: | SI-04(1).01-00 | See Exhibit F | | |
| | | | SI-04(2).01-00 | Control Enhancements: | SI-04(2).01-00 | See Exhibit F | | |
| | | | SI-04(3).01-00 | Control Enhancements: | SI-04(3).01-00 | See Exhibit F | | |
| | | | SI-04(4).01-00 | Control Enhancements: | SI-04(4).01-00 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | SI-04(5).01-00 | Control Enhancements: | SI-04(5).01-00 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | SI-04(6).01-00 | Control Enhancements: | SI-04(6).01-00 | See Exhibit F | | |
| | | | SI-04(7).01-00 | Control Enhancements: | SI-04(7).01-00 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | SI-04(8).01-00 | Control Enhancements: | SI-04(8).01-00 | See Exhibit F | | |
| | | | SI-04(9).01-00 | Control Enhancements: | SI-04(9).01-00 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | SI-04(10).01-00 | Control Enhancements: | SI-04(10).01-00 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | SI-04(11).01-00 | Control Enhancements: | SI-04(11).01-00 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | SI-04(12).01-00 | Control Enhancements: | SI-04(12).01-00 | See Exhibit F | | |
| | | | SI-04(13).01-00 | Control Enhancements: | SI-04(13).01-00 | See Exhibit F | | |
| | | | SI-04(13).01-01 | Control Enhancements: | SI-04(13).01-01 | See Exhibit F | | |
| | | | SI-04(13).01-02 | Control Enhancements: | SI-04(13).01-02 | See Exhibit F | | |
| | | | SI-04(13).01-03 | Control Enhancements: | SI-04(13).01-03 | See Exhibit F | | |

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| | | | SI-04(14).01-00 | Control Enhancements: | SI-04(14).01-00 | See Exhibit F | | |
| | | | SI-04(15).01-00 | Control Enhancements: | SI-04(15).01-00 | See Exhibit F | | |
| | | | SI-04(16).01-00 | Control Enhancements: | SI-04(16).01-00 | See Exhibit F | | |
| | | | SI-04(17).01-00 | Control Enhancements: | SI-04(17).01-00 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | SI-05.01-00 | SI-5 SECURITY ALERTS, ADVISORIES, AND DIRECTIVES | SI-05.01-00 | See Exhibit F | | |
| | | | SI-05.01-01 | | SI-05.01-01 | See Exhibit F | | |
| | | | SI-05.01-02 | | SI-05.01-02 | See Exhibit F | | |
| | | | SI-05.01-03 | | SI-05.01-03 | See Exhibit F | | |
| | | | SI-05.01-04 | | SI-05.01-04 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | SI-05(1).01-00 | Control Enhancements: | SI-05(1).01-00 | See Exhibit F | | |
| | | | SI-06.01-00 | SI-6 SECURITY FUNCTIONALITY VERIFICATION | SI-06.01-00 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | SI-06(1).01-00 | Control Enhancements: | SI-06(1).01-00 | See Exhibit F | | |
| | | | SI-06(2).01-00 | Control Enhancements: | SI-06(2).01-00 | See Exhibit F | | |
| | | | SI-06(3).01-00 | Control Enhancements: | SI-06(3).01-00 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| | | | SI-07.01-00 | SI-7 SOFTWARE AND INFORMATION INTEGRITY | SI-07.01-00 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | SI-07(1).01-00 | Control Enhancements: | SI-07(1).01-00 | See Exhibit F | | |
| | | | SI-07(2).01-00 | Control Enhancements: | SI-07(2).01-00 | See Exhibit F | | |
| | | | SI-07(3).01-00 | Control Enhancements: | SI-07(3).01-00 | See Exhibit F | | |
| | | | SI-07(4).01-00 | Control Enhancements: | SI-07(4).01-00 | See Exhibit F | | |
| | | | SI-08.01-00 | SI-8 SPAM PROTECTION | SI-08.01-00 | See Exhibit F | | |
| | | | SI-08.01-01 | | SI-08.01-01 | See Exhibit F | | |
| | | | SI-08.01-02 | | SI-08.01-02 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | SI-08(1).01-00 | Control Enhancements: | SI-08(1).01-00 | See Exhibit F | | |
| | | | SI-08(2).01-00 | Control Enhancements: | SI-08(2).01-00 | See Exhibit F | | |
| | | | SI-09.01-00 | SI-9 INFORMATION INPUT RESTRICTIONS | SI-09.01-00 | See Exhibit F | | |
| | | | | | | See Exhibit F | | |
| | | | SI-10.01-00 | SI-10 INFORMATION INPUT VALIDATION | SI-10.01-00 | See Exhibit F | | |
| | | | | | | See Exhibit F | | |

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| | | | SI-11.01-00 | SI-11 ERROR HANDLING | SI-11.01-00 | See Exhibit F | | |
| | | | SI-11.01-01 | | SI-11.01-01 | See Exhibit F | | |
| | | | SI-11.01-02 | | SI-11.01-02 | See Exhibit F | | |
| | | | SI-11.01-03 | | SI-11.01-03 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | SI-12.01-00 | SI-12 INFORMATION OUTPUT HANDLING AND RETENTION | SI-12.01-00 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | SI-13.01-00 | SI-13 PREDICTABLE FAILURE PREVENTION | SI-13.01-00 | See Exhibit F | | |
| | | | SI-13.01-01 | | SI-13.01-01 | See Exhibit F | | |
| | | | SI-13.01-02 | | SI-13.01-02 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | SI-13(1).01-00 | Control Enhancements: | SI-13(1).01-00 | See Exhibit F | | |
| | | | SI-13(2).01-00 | Control Enhancements: | SI-13(2).01-00 | See Exhibit F | | |
| | | | SI-13(3).01-00 | Control Enhancements: | SI-13(3).01-00 | See Exhibit F | | |
| | | | SI-13(4).01-00 | Control Enhancements: | SI-13(4).01-00 | See Exhibit F | | |
| | | | SI-13(4).01-01 | Control Enhancements: | SI-13(4).01-01 | See Exhibit F | | |
| | | | SI-13(4).01-02 | Control Enhancements: | SI-13(4).01-02 | See Exhibit F | | |
| | | | | | Enhanced Supplemental | See Exhibit F | | |
| PM | | | PM-01.01-00 | PM-1 INFORMATION SECURITY PROGRAM PLAN | PM-01.01-00 | See Exhibit F | | |
| | | | PM-01.01-01 | | PM-01.01-01 | See Exhibit F | | |
| | | | PM-01.01-02 | | PM-01.01-02 | See Exhibit F | | |
| | | | PM-01.01-03 | | PM-01.01-03 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | PM-02.01-00 | PM-2 SENIOR INFORMATION SECURITY OFFICER | PM-02.01-00 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | PM-03.01-00 | PM-3 INFORMATION SECURITY RESOURCES | PM-03.01-00 | See Exhibit F | | |
| | | | PM-03.01-01 | | PM-03.01-01 | See Exhibit F | | |
| | | | PM-03.01-02 | | PM-03.01-02 | See Exhibit F | | |
| | | | PM-03.01-03 | | PM-03.01-03 | See Exhibit F | | |
| | | | | | | See Exhibit F | | |
| | | | PM-04.01-00 | PM-4 PLAN OF ACTION AND MILESTONES PROCESS | PM-04.01-00 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | PM-05.01-00 | PM-5 INFORMATION SYSTEM INVENTORY | PM-05.01-00 | See Exhibit F | | |

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| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | PM-06.01-00 | PM-6 INFORMATION SECURITY MEASURES OF PERFORMANCE | PM-06.01-00 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | PM-07.01-00 | PM-7 ENTERPRISE ARCHITECTURE | PM-07.01-00 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | PM-08.01-00 | PM-8 CRITICAL INFRASTRUCTURE PLAN | PM-08.01-00 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | PM-09.01-00 | PM-9 RISK MANAGEMENT STRATEGY | PM-09.01-00 | See Exhibit F | | |
| | | | PM-09.01-01 | | PM-09.01-01 | See Exhibit F | | |
| | | | PM-09.01-02 | | PM-09.01-02 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | PM-10.01-00 | PM-10 SECURITY AUTHORIZATION PROCESS | PM-10.01-00 | See Exhibit F | | |
| | | | PM-10.01-01 | | PM-10.01-01 | See Exhibit F | | |
| | | | PM-10.01-02 | | PM-10.01-02 | See Exhibit F | | |
| | | | PM-10.01-03 | | PM-10.01-03 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |
| | | | PM-11.01-00 | PM-11 MISSION/BUSINESS PROCESS DEFINITION | PM-11.01-00 | See Exhibit F | | |
| | | | PM-11.01-01 | | PM-11.01-01 | See Exhibit F | | |
| | | | PM-11.01-02 | | PM-11.01-02 | See Exhibit F | | |
| | | | | | Supplemental Guidance | See Exhibit F | | |

## SOV Consolidated Non-Functional Requirements Traceability Matrix (RTM)

### HIPAA

| Base | Level | Sub | Req ID New | Focus | Specifics | Requirement Description | Requirement Fulfilled? | Notes | Evidence |
|---|---|---|---|---|---|---|---|---|---|
| HIPAA | 00 | 0 | HIPAA.00.0 | CITATIONS | GENERAL RULES | Vendor will comply with all HIPAA GENERAL RULES | | | |
| HIPAA | 00 | 1 | HIPAA.00.1 | 164.306(a) | Ensure Confidentiality, Integrity and Availability | (a) General requirements. Vendor must do the following:<br>(1) Ensure the confidentiality, integrity, and availability of all electronic protected health information the covered entity creates, receives, maintains, or transmits.<br>(2) Protect against any reasonably anticipated threats or hazards to the security or integrity of such information.<br>(3) Protect against any reasonably anticipated uses or disclosures of such information that are not permitted or required under subpart E of this part.<br>(4) Ensure compliance with this subpart by its workforce. | Ensure CIA and protect against threats | | |
| HIPAA | 00 | 2 | HIPAA.00.2 | 164.306(b) | Flexibility of Approach | (b) Flexibility of approach.<br>(1) Vendor may use any security measures that allow the vendor to reasonably and appropriately implement the standards and implementation specifications as specified in this subpart.<br>(2) In deciding which security measures to use, a vendortake into account the following factors:<br>(i) The size, complexity, and capabilities of the covered entity.<br>(ii) The vendor's technical infrastructure, hardware, and software security capabilities.<br>(iii) The costs of security measures.<br>(iv) The probability and criticality of potential risks to electronic protected health information. | Reasonably consider factors in security compliance | | |
| HIPAA | 00 | 3 | HIPAA.00.3 | 164.306(c) | Standards | (c) Standards. A vendor must comply with the standards as provided in this section and in § 164.308, § 164.310, § 164.312, § 164.314, and § 164.316 with respect to all electronic protected health information. | Covered Entities CEs must comply with standards | | |
| HIPAA | 00 | 4 | HIPAA.00.4 | 164.306(d) | Implementation Specifications | (d) Implementation specifications.<br>In this subpart:<br>(1) Implementation specifications are required or addressable. If an implementation specification is required, the word "Required" appears in parentheses after the title of the implementation specification. If an implementation specification is addressable, the word "Addressable" appears in parentheses after the title of the implementation specification.<br>(2) When a standard adopted in § 164.308, § 164.310, § 164.312, § 164.314, or § 164.316 includes required implementation specifications, a covered entity must implement the implementation specifications.<br>(3) When a standard adopted in § 164.308, § 164.310, § 164.312, § 164.314, or § 164.316 includes addressable implementation specifications, a covered entity must--<br>(i) Assess whether each implementation specification is a reasonable and appropriate safeguard in its environment, when analyzed with reference to the likely contribution to protecting the entity's electronic protected health information; and<br>(ii) As applicable to the entity--<br>(A) Implement the implementation specification if reasonable and appropriate; or<br>(B) If implementing the implementation specification is not reasonable and appropriate--<br>(1) Document why it would not be reasonable and appropriate to implement the implementation specification; and<br>(2) Implement an equivalent alternative measure if reasonable and appropriate. | Required and Addressable Implementation Specification requirements | | |
| HIPAA | 00 | 5 | HIPAA.00.5 | 164.306(e) | Maintenance | (e) Maintenance. Security measures implemented to comply with standards and implementation specifications adopted under § 164.105 and this subpart must be reviewed and modified as needed to continue provision of reasonable and appropriate protection of electronic protected health information as described at § 164.316. | Ongoing review and modification of security measures | | |
| HIPAA | 01 | 0 | HIPAA.01.0 | CITATIONS | ADMINISTRATIVE SAFEGUARDS | Vendor will comply with all HIPAA ADMINISTRATIVE SAFEGUARDS | | | |
| HIPAA | 01 | 1 | HIPAA.01.1 | 164.308(a)(1)(i) | Security Management Process | Vendor will implement policies and procedures to prevent, detect, contain and correct security violations | P&P to manage security violations | | |
| HIPAA | 01 | 2 | HIPAA.01.2 | 164.308(a)(1)(ii)(A) | Risk Analysis | Vendor will conduct an accurate and thorough assessment of the potential risks and vulnerabilities to the confidentiality, integrity, and availability of electronic protected health information held by the covered entity. | Conduct vulnerability assessment | | |
| HIPAA | 01 | 3 | HIPAA.01.3 | 164.308(a)(1)(ii)(B) | Risk Management | Vendor will implement security measures sufficient to reduce risks and vulnerabilities to a reasonable and appropriate level to comply with Sec 164.306(a). | Implement security measures to reduce risk of security breaches | | |
| HIPAA | 01 | 4 | HIPAA.01.4 | 164.308(a)(1)(ii)(C) | Sanction Policy | Vendor will apply appropriate sanctions against workforce members who fail to comply with the security policies and procedures of the covered entity. | Worker sanction for P&P violations | | |
| HIPAA | 01 | 5 | HIPAA.01.5 | 164.308(a)(1)(ii)(D) | Information System Activity Review | Vendor will implement procedures to regularly review records of information system activity, such as audit logs, access reports, and security incident tracking reports. | Procedures to review system activity | | |
| HIPAA | 01 | 6 | HIPAA.01.6 | 164.308(a)(2) | Assigned Security Responsibility | Vendor will identify the security official who is responsible for the development and implementation of the policies and procedures required by this subpart for the entity. | Identify security official responsible for P&P | | |
| HIPAA | 01 | 7 | HIPAA.01.7 | 164.308(a)(3)(i) | Workforce Security | Vendor will implement policies and procedures to ensure that all members of its workforce have appropriate access to electronic protected health information, as provided under paragraph (a)(4) of this section, and to prevent those workforce members who do not have access under paragraph (a)(4) of this section from obtaining access to electronic protected health information. | Implement P&P to ensure appropriate PHI access | | |
| HIPAA | 01 | 8 | HIPAA.01.8 | 164.308(a)(3)(ii)(A) | Authorization and/or Supervision | Vendor will implement procedures for authorization and/or supervision of workforce members who work with electronic protected health information or in locations where it might be accessed. | Authorization/supervision for PHI access | | |
| HIPAA | 01 | 9 | HIPAA.01.9 | 164.308(a)(3)(ii)(B) | Workforce Clearance Procedure | Vendor will implement procedures to determine that the access of a workforce member to electronic protected health information is appropriate. | Procedures to ensure appropriate PHI access | | |
| HIPAA | 01 | 10 | HIPAA.01.10 | 164.308(a)(3)(ii)(C) | Termination Procedures | Vendor will implement procedures for termination access to electronic protected health information when the employment of a workforce member ends or as required by determination made as specified in paragraph (a)(3)(ii)(B) of this section. | Procedures to terminate PHI access | | |
| HIPAA | 01 | 11 | HIPAA.01.11 | 164.308(a)(4)(i) | Information Access Management | Vendor will implement policies and procedures for authorizing access to electronic protected health information that are consistent with the applicable requirements of subpart E of this part. | P&P to authorize access to PHI | | |
| HIPAA | 01 | 12 | HIPAA.01.12 | 164.308(a)(4)(ii)(A) | Isolation Health Clearinghouse Functions | If a health care clearinghouse is part of a larger organization, the clearinghouse must implement polices and procedures that protect the electronic protected health information of the clearinghouse from unauthorized access by the larger organization. | P&P to separate PHI from other operations | | |
| HIPAA | 01 | 13 | HIPAA.01.13 | 164.308(a)(4)(ii)(B) | Access Authorization | Implement policies and procedures for granting access to electronic protected health information, for example, through access to a workstation, transaction, program, process or other mechanism. | P&P to authorize access to PHI | | |

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| HIPAA | 01 | 14 | HIPAA.01.14 | 164.308(a)(4)(ii)(C) | Access Establishment and Modification | Vendor will implement policies and procedures that, based upon the entity's access authorization policies, establish, document, review, and modify a user's right of access to a workstation, transaction, program, or process. | P&P to grant access to PHI | | |
| HIPAA | 01 | 15 | HIPAA.01.15 | 164.308(a)(5)(i) | **Security Awareness Training** | Vendor will implement a security awareness and training program for all members of its workforce (including management). | Training program for workers and managers | | |
| HIPAA | 01 | 16 | HIPAA.01.16 | 164.308(a)(5)(ii)(A) | Security Reminders | Vendor will distribute periodic security updates. | Distribute periodic security updates | | |
| HIPAA | 01 | 17 | HIPAA.01.17 | 164.308(a)(5)(ii)(B) | Protection from Malicious Software | Vendor will have procedures for guarding against, detecting, and reporting malicious software. | Procedures to guard against malicious software | | |
| HIPAA | 01 | 18 | HIPAA.01.18 | 164.308(a)(5)(ii)(C) | Log-in Monitoring | Vendor will have procedures for monitoring log-in attempts and reporting discrepancies. | Procedures and monitoring of log-in attempts | | |
| HIPAA | 01 | 19 | HIPAA.01.19 | 164.308(a)(5)(ii)(D) | Password Management | Vendor will have procedures for creating, changing, and safeguarding passwords. | Procedures for password management | | |
| HIPAA | 01 | 20 | HIPAA.01.20 | 164.308(a)(6)(i) | **Security Incident Procedures** | Vendor will implement policies and procedures to address security incidents. | P&P to manage security incidents | | |
| HIPAA | 01 | 21 | HIPAA.01.21 | 164.308(a)(6)(ii) | Response and Reporting | Vendor will identify and respond to suspected or known security incidents; mitigate, to the extent practicable, harmful effects of security incidents that are known to the covered entity; and document security incidents and their outcomes. | Mitigate and document security incidents | | |
| HIPAA | 01 | 22 | HIPAA.01.22 | 164.308(a)(7)(i) | **Contingency Plan** | Vendor will establish (and implement as needed) policies and procedures for responding to an emergency or other occurrence (for example, fire, vandalism, system failure, and natural disaster) that damages systems that contain electronic protected health information. | Emergency response P&P | | |
| HIPAA | 01 | 23 | HIPAA.01.23 | 164.308(a)(7)(ii)(A) | Data Backup Plan | Vendor will establish and implement procedures to create and maintain retrievable exact copies of electronic protected health information. | Data backup planning & procedures | | |
| HIPAA | 01 | 24 | HIPAA.01.24 | 164.308(a)(7)(ii)(B) | Disaster Recovery Plan | Vendor will establish (and implement as needed) procedures to restore loss of data. | Data recovery planning & procedures | | |
| HIPAA | 01 | 25 | HIPAA.01.25 | 164.308(a)(7)(ii)(C) | Emergency Mode Operation Plan | Vendor will establish (and implement as needed) procedures to enable continuation of critical business processes for protection of the security of electronic protected health information while operation in emergency mode. | Business continuity procedures | | |
| HIPAA | 01 | 26 | HIPAA.01.26 | 164.308(a)(7)(ii)(D) | Testing and Revision Procedures | Vendor will implement procedures for periodic testing and revision of contingency plans. | Contingency planning periodic testing procedures | | |
| HIPAA | 01 | 27 | HIPAA.01.27 | 164.308(a)(7)(ii)(E) | Applications and Data Criticality Analysis | Vendor will assess the relative criticality of specific applications and data in support of other contingency plan components. | Prioritize data and system criticality for contingency planning | | |
| HIPAA | 01 | 28 | HIPAA.01.28 | 164.308(a)(8) | **Evaluation** | Vendor will perform a periodic technical and nontechnical evaluation, based initially upon the standards implemented under this rule and subsequently, in response to environmental or operational changes affecting the security of electronic protected health information, that established the extent to which an entity's security policies and procedures meet the requirements of this subpart. | Periodic security evaluation | | |
| HIPAA | 01 | 29 | HIPAA.01.29 | 164.308(b)(1) | **Business Associate Contracts and Other Arrangements** | Covered Entity, in accordance with § 164.306, may permit a business associate (Vendor) to create, receive, maintain, or transmit electronic protected health information on the covered entity's behalf only if the covered entity obtains satisfactory assurances, in accordance with § 164.314(a) that the business associate will appropriately safeguard the information. | CE implement BACs to ensure safeguards | | |
| HIPAA | 01 | 30 | HIPAA.01.30 | 164.308(b)(4) | Written Contract | Vendor will sign document (contract) the satisfactory assurances required by paragraph (b)(1) of this section through a written contract or other arrangement with the business associate that meets the applicable requirements of § 164.314(a). | Implement compliant BACs | | |
| HIPAA | 02 | 0 | HIPAA.02.0 | **CITATIONS** | **PHYSICAL SAFEGUARDS** | **Vendor will comply with all HIPAA PHYSICAL SAFEGUARDS** | | | |
| HIPAA | 02 | 1 | HIPAA.02.1 | 164.310(a)(1) | **Facility Access Controls** | Vendor will implement policies and procedures to limit physical access to its electronic information systems and the facility or facilities in which they are housed, while ensuring that properly authorized access is allowed. | P&P to limit access to systems and facilities | | |
| HIPAA | 02 | 2 | HIPAA.02.2 | 164.310(a)(2)(i) | Contingency Operations | Vendor will establish (and implement as needed) procedures that allow facility access in support of restoration of lost data under the disaster recovery plan and emergency mode operations plan in the event of an emergency. | Procedures to support emergency operations and recovery | | |
| HIPAA | 02 | 3 | HIPAA.02.3 | 164.310(a)(2)(ii) | Facility Security Plan | Vendor will implement policies and procedures to safeguard the facility and the equipment there in from unauthorized physical access, tampering, and theft. | P&P to safeguard equipment and facilities | | |
| HIPAA | 02 | 4 | HIPAA.02.4 | 164.310(a)(2)(iii) | Access Control Validation Procedures | Vendor will implement procedures to control and validate a person's access to facilities based on their role or function, including visitor control, and control of access to software programs for testing and revision. | Facility access procedures for personnel | | |
| HIPAA | 02 | 5 | HIPAA.02.5 | 164.310(a)(2)(iv) | Maintenance Records | Vendor will implement policies and procedures to document repairs and modifications to the physical components of a facility that are related to security (for example, hardware, walls, doors, and locks). | P&P to document security-related repairs and modifications | | |
| HIPAA | 02 | 6 | HIPAA.02.6 | 164.310(b) | **Workstation Use** | Vendor will implement policies and procedures that specify the proper functions to be performed, the manner in which those functions are to be performed, and the physical attributes of the surroundings of a specific workstation or class of workstation that can access electronic protected health information. | P&P to specify workstation environment & use | | |
| HIPAA | 02 | 7 | HIPAA.02.7 | 164.310(c) | **Workstation Security** | Vendor will implement physical safeguards for all workstations that access electronic protected health information, to restrict access to authorized users. | Physical safeguards for workstation access | | |
| HIPAA | 02 | 8 | HIPAA.02.8 | 164.310(d)(1) | **Device and Media Controls** | Vendor will implement policies and procedures that govern the receipt and removal of hardware and electronic media that contain electronic protected health information into and out of a facility, and the movement of these items within the facility. | P&P to govern receipt and removal of hardware and media | | |
| HIPAA | 02 | 9 | HIPAA.02.9 | 164.310(d)(2)(i) | Disposal | Vendor will implement policies and procedures to address the final disposition of electronic protected health information, and/or the hardware or electronic media on which it is stored. | P&P to manage media and equipment disposal | | |
| HIPAA | 02 | 10 | HIPAA.02.10 | 164.310(d)(2)(ii) | Media Re-use | Vendor will implement procedures for removal of electronic protected health information from electronic media before the media are made available for re-use. | P&P to remove PHI from media and equipment | | |
| HIPAA | 02 | 11 | HIPAA.02.11 | 164.310(d)(2)(iii) | Accountability | Vendor will maintain a record of the movements of hardware and electronic media and any person responsible therefore. | Document hardware and media movement | | |
| HIPAA | 02 | 12 | HIPAA.02.12 | 164.310(d)(2)(iv) | Data Backup and Storage | Vendor will create a retrievable, exact copy of electronic protected health information, when needed, before movement of equipment. | Backup PHI before moving equipment | | |
| HIPAA | 03 | 0 | HIPAA.03.0 | **CITATIONS** | **TECHNICAL SAFEGUARDS** | **Vendor will comply with all HIPAA TECHNICAL SAFEGUARDS** | | | |
| HIPAA | 03 | 1 | HIPAA.03.1 | 164.312(a)(1) | **Access Control** | Vendor will implement technical policies and procedures for electronic information systems that maintain electronic protected health information to allow access only to those persons or software programs that have been granted access rights as specified in § 164.308(a)(4). | Technical (administrative) P&P to manage PHI access | | |
| HIPAA | 03 | 2 | HIPAA.03.2 | 164.312(a)(2)(i) | Unique User Identification | Vendor will assign a unique name and/or number for identifying and tracking user identity. | Assign unique IDs to support tracking | | |
| HIPAA | 03 | 3 | HIPAA.03.3 | 164.312(a)(2)(ii) | Emergency Access Procedure | Vendor will establish (and implement as needed) procedures for obtaining necessary electronic protected health information during an emergency. | Procedures to support emergency access | | |

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|---|---|---|---|---|---|---|---|---|---|
| HIPAA | 03 | 4 | HIPAA.03.4 | 164.312(a)(2)(iii) | Automatic Logoff | Vendor will implement electronic procedures that terminate an electronic session after a predetermined time of inactivity. | Session termination mechanisms | | |
| HIPAA | 03 | 5 | HIPAA.03.5 | 164.312(a)(2)(iv) | Encryption and Decryption | Vendor will implement a mechanism to encrypt and decrypt electronic protected health information. | Mechanism for encryption of stored PHI | | |
| HIPAA | 03 | 6 | HIPAA.03.6 | 164.312(b) | **Audit Controls** | Vendor will implement hardware, software, and/or procedural mechanisms that record and examine activity in information systems that contain or use electronic protected health information. | Procedures and mechanisms for monitoring system activity | | |
| HIPAA | 03 | 7 | HIPAA.03.7 | 164.312(c)(1) | **Integrity** | Vendor will implement policies and procedures to protect electronic protected health information from improper alteration or destruction. | P&P to safeguard PHI unauthorized alteration | | |
| HIPAA | 03 | 8 | HIPAA.03.8 | 164.312(c)(2) | Mechanism to Authenticate Electronic Protected Health Information | Vendor will implement electronic mechanisms to corroborate that electronic protected health information has not been altered or destroyed in an unauthorized manner. | Mechanisms to corroborate PHI not altered | | |
| HIPAA | 03 | 9 | HIPAA.03.9 | 164.312(d) | **Person or Entity Authentication** | Vendor will implement procedures to verify that a person or entity seeking access to electronic protected health information is the one claimed. | Procedures to verify identities | | |
| HIPAA | 03 | 10 | HIPAA.03.10 | 164.312(e)(1) | **Transmission Security** | Vendor will implement technical security measures to guard against unauthorized access to electronic protected health information that is being transmitted over an electronic communications network. | Measures to guard against unauthorized access to transmitted PHI | | |
| HIPAA | 03 | 11 | HIPAA.03.11 | 164.312(e)(2)(i) | Integrity Controls | Vendor will implement security measures to ensure that electronically transmitted electronic protected health information is not improperly modified without detection until disposed of. | Measures to ensure integrity of PHI on transmission | | |
| HIPAA | 03 | 12 | HIPAA.03.12 | 164.312(e)(2)(ii) | Encryption | Vendor will implement a mechanism to encrypt electronic protected health information whenever deemed appropriate. | Mechanism for encryption of transmitted PHI | | |
| HIPAA | 04 | 0 | HIPAA.04.0 | **CITATIONS** | **ORGANIZATIONAL REQUIREMENTS** | | | | |
| HIPAA | 04 | 1 | HIPAA.04.1 | 164.314(a)(1) | **Business Associate Contracts or Other Arrangements** | Hosting Provider will at all times comply with the terms of the Business Associate Agreement between CGI Technologies and Solutions Inc. and State of Vermont dated as of [December 13, 2012] (the "BAA").<br>(A) Terminated the contract or arrangement, if feasible; or<br>(B) If termination is not feasible, reported the problem to the Secretary. | CE must ensure BA safeguards PHI | | |
| HIPAA | 04 | 2 | HIPAA.04.2 | 164.314(a)(2) | Business Associate Contracts | --- | BACs must contain security language | | |
| HIPAA | 04 | 3 | HIPAA.04.3 | 164.314(b)(1) | **Requirements for Group Health Plans** | Except when the only electronic protected health information disclosed to a plan sponsor is disclosed pursuant to § 164.504(f)(1)(ii) or (iii), or as authorized under § 164.508, a group health plan must ensure that its plan documents provide that the plan sponsor will reasonably and appropriately safeguard electronic protected health information created, received, maintained, or transmitted to or by the plan sponsor on behalf of the group health plan. | Plan documents must reflect security safeguards | | |
| HIPAA | 04 | 4 | HIPAA.04.4 | 164.314(b)(2)(i) | Implement Safeguards | The plan documents of the group health plan must be amended to incorporate provisions to require the plan sponsor to--<br>(i) Implement administrative, physical, and technical safeguards that reasonably and appropriately protect the confidentiality, integrity, and availability of the electronic protected health information that it creates, receives, maintains, or transmits on behalf of the group health plan; | Plan sponsor to implement safeguards as appropriate | | |
| HIPAA | 04 | 5 | HIPAA.04.5 | 164.314(b)(2)(ii) | Ensure Adequate Separation | Vendor will ensure that the adequate separation required by § 164.504(f)(2)(iii) is supported by reasonable and appropriate security measures; | Security measures to separate PHI from plan sponsor and plan | | |
| HIPAA | 04 | 6 | HIPAA.04.6 | 164.314(b)(2)(iii) | Ensure Agents Safeguard | Vendor will ensure that any agent, including a subcontractor, to whom it provides this information agrees to implement reasonable and appropriate security measures to protect the information; and | Ensure subcontractors safeguard PHI | | |
| HIPAA | 04 | 7 | HIPAA.04.7 | 164.314(b)(2)(iv) | Report Security Incidents | Vendor will report to the group health plan any security incident of which it becomes aware. | Plan sponsors report breaches to health plan | | |
| HIPAA | 04 | 8 | HIPAA.04.8 | 164.316(a) | **Policies and Procedures** | --- | P&P to ensure safeguards to PHI | | |
| HIPAA | 04 | 9 | HIPAA.04.9 | 164.316(b)(1) | Documentation | Documentation.<br>(i) Vendor will maintain the policies and procedures implemented to comply with this subpart in written (which may be electronic) form; and<br>(ii) If an action, activity or assessment is required by this subpart to be documented, maintain a written (which may be electronic) record of the action, activity, or assessment. | Document P&P and actions & activities | | |
| HIPAA | 04 | 10 | HIPAA.04.10 | 164.316(b)(2)(i) | Time Limit | Vendor will retain the documentation required by paragraph (b)(1) of this section for 6 years from the date of its creation or the date when it last was in effect, whichever is later. | Retain documentation for 6 years | | |
| HIPAA | 04 | 11 | HIPAA.04.11 | 164.316(b)(2)(ii) | Availability | Vendor will make documentation available to those persons responsible for implementing the procedures to which the documentation pertains. | Documentation available to system administrators | | |
| HIPAA | 04 | 12 | HIPAA.04.12 | 164.316(b)(2)(iii) | Updates | Vendor will reviews documentation periodically, and updates as needed, in response to environmental or operational changes affecting the security of the electronic protected health information; | Periodic review and updates to changing needs | | |

## SOV Consolidated Non-Functional Requirements Traceability Matrix (RTM)

### PHI and Privacy

| Base | Level | Sub | Req ID New | Focus | Specifics | Requirement Description | Notes | Evidence |
|---|---|---|---|---|---|---|---|---|
| PHI | 01 | 0 | PHI.01.0 | PHI and Privacy, | | See Exhibit F | | |
| PHI | 01 | 1 | PHI.01.1 | PHI and Privacy, | Testing and Revision Procedures | See Exhibit F | | |
| PHI | 01 | 2 | PHI.01.2 | PHI and Privacy, | Encryption | See Exhibit F | | |
| PHI | 01 | 3 | PHI.01.3 | PHI and Privacy, | | See Exhibit F | | |
| PHI | 01 | 4 | PHI.01.4 | PHI and Privacy, Access Control (§ 164.312(a)(1)) | Data Backup and Storage | See Exhibit F | | |
| PHI | 01 | 5 | PHI.01.5 | PHI and Privacy, Access Control (§ 164.312(a)(1)) | | See Exhibit F | | |
| PHI | 01 | 6 | PHI.01.6 | PHI and Privacy, Access Control (§ 164.312(a)(1)) | Unique User Identification | See Exhibit F | | |
| PHI | 01 | 7 | PHI.01.7 | PHI and Privacy, Access Control (§ 164.312(a)(1)) | Emergency Access Procedure | See Exhibit F | | |
| PHI | 01 | 8 | PHI.01.8 | PHI and Privacy, Access Control (§ 164.312(a)(1)) | Automatic Logoff | See Exhibit F | | |
| PHI | 01 | 9 | PHI.01.9 | PHI and Privacy, Assigned Security Responsibility (§ 164.308(a)(2)) | Information System Activity Review | See Exhibit F | | |
| PHI | 01 | 10 | PHI.01.10 | PHI and Privacy, Audit Controls (§ 164.312(b)) | Encryption and Decryption | See Exhibit F | | |
| PHI | 01 | 11 | PHI.01.11 | PHI and Privacy, Business Associate Contracts and Other Arrangements (§ 164.308(b)(1)) | | See Exhibit F | | |
| PHI | 01 | 12 | PHI.01.12 | PHI and Privacy, Business Associate Contracts and Other Arrangements (§ 164.308(b)(1)) | | See Exhibit F | | |
| PHI | 01 | 13 | PHI.01.13 | PHI and Privacy, Business Associate Contracts or Other Arrangements (§ 164.314(a)(2)) | Business Associate Contracts | See Exhibit F | | |
| PHI | 01 | 14 | PHI.01.14 | PHI and Privacy, Business Associate Contracts or Other Arrangements (§ 164.314(a)(2)) | | See Exhibit F | | |
| PHI | 01 | 15 | PHI.01.15 | PHI and Privacy, Business Associate Contracts or Other Arrangements (§ 164.314(a)(2)) | | See Exhibit F | | |
| PHI | 01 | 16 | PHI.01.16 | PHI and Privacy, Business Associate Contracts or Other Arrangements (§ 164.314(a)(2)) | | See Exhibit F | | |
| PHI | 01 | 17 | PHI.01.17 | PHI and Privacy, Contingency Plan (§ 164.308(a)(7)) | Response and Reporting | See Exhibit F | | |
| PHI | 01 | 18 | PHI.01.18 | PHI and Privacy, Contingency Plan (§ 164.308(a)(7)) | | See Exhibit F | | |
| PHI | 01 | 19 | PHI.01.19 | PHI and Privacy, Contingency Plan (§ 164.308(a)(7)) | Data Backup Plan | See Exhibit F | | |
| PHI | 01 | 20 | PHI.01.20 | PHI and Privacy, Contingency Plan (§ 164.308(a)(7)) | Disaster Recovery Plan | See Exhibit F | | |
| PHI | 01 | 21 | PHI.01.21 | PHI and Privacy, Contingency Plan (§ 164.308(a)(7)) | Emergency Model Operation Plan | See Exhibit F | | |
| PHI | 01 | 22 | PHI.01.22 | PHI and Privacy, Device and Media Controls (§ 164.310(d)(1)) | | See Exhibit F | | |
| PHI | 01 | 23 | PHI.01.23 | PHI and Privacy, Device and Media Controls (§ 164.310(d)(1)) | | See Exhibit F | | |
| PHI | 01 | 24 | PHI.01.24 | PHI and Privacy, Device and Media Controls (§ 164.310(d)(1)) | Disposal | See Exhibit F | | |
| PHI | 01 | 25 | PHI.01.25 | PHI and Privacy, Device and Media Controls (§ 164.310(d)(1)) | Media Reuse | See Exhibit F | | |

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| PHI | 01 | 26 | PHI.01.26 | PHI and Privacy, Device and Media Controls (§ 164.310(d)(1)) | Accountability | See Exhibit F | | |
| PHI | 01 | 27 | PHI.01.27 | PHI and Privacy, Evaluation (§ 164.308(a)(8)) | Application and Data Criticality | See Exhibit F | | |
| PHI | 01 | 28 | PHI.01.28 | PHI and Privacy, Evaluation (§ 164.308(a)(8)) | | See Exhibit F | | |
| PHI | 01 | 29 | PHI.01.29 | PHI and Privacy, Evaluation (§ 164.308(a)(8)) | | See Exhibit F | | |
| PHI | 01 | 30 | PHI.01.30 | PHI and Privacy, Evaluation (§ 164.308(a)(8)) | ISO 27002 Certificate of Conformance - | See Exhibit F | | |
| PHI | 01 | 31 | PHI.01.31 | PHI and Privacy, Evaluation (§ 164.308(a)(8)) | ISO 27001 Certification | See Exhibit F | | |
| PHI | 01 | 32 | PHI.01.32 | PHI and Privacy, Facility Access Controls (§ 164.310(a)(1)) | Written Contracts or other Arrangements | See Exhibit F | | |
| PHI | 01 | 33 | PHI.01.33 | PHI and Privacy, Facility Access Controls (§ 164.310(a)(1)) | | See Exhibit F | | |
| PHI | 01 | 34 | PHI.01.34 | PHI and Privacy, Facility Access Controls (§ 164.310(a)(1)) | | See Exhibit F | | |
| PHI | 01 | 35 | PHI.01.35 | PHI and Privacy, Facility Access Controls (§ 164.310(a)(1)) | Facility Security Plan | See Exhibit F | | |
| PHI | 01 | 36 | PHI.01.36 | PHI and Privacy, Facility Access Controls (§ 164.310(a)(1)) | Access Control and Validation Procedures | See Exhibit F | | |
| PHI | 01 | 37 | PHI.01.37 | PHI and Privacy, Facility Access Controls (§ 164.310(a)(1)) | Maintenance Records | See Exhibit F | | |
| PHI | 01 | 38 | PHI.01.38 | PHI and Privacy, General Scope of Services | | See Exhibit F | | |
| PHI | 01 | 39 | PHI.01.39 | PHI and Privacy, Information Access Management (§ 164.308(a)(4)) | Termination Procedures | See Exhibit F | | |
| PHI | 01 | 40 | PHI.01.40 | PHI and Privacy, Information Access Management (§ 164.308(a)(4)) | | See Exhibit F | | |
| PHI | 01 | 41 | PHI.01.41 | PHI and Privacy, Information Access Management (§ 164.308(a)(4)) | Isolating Health Care Clearinghouse Functions | See Exhibit F | | |
| PHI | 01 | 42 | PHI.01.42 | PHI and Privacy, Information Access Management (§ 164.308(a)(4)) | Access Authorization | See Exhibit F | | |
| PHI | 01 | 43 | PHI.01.43 | PHI and Privacy, Integrity (§ 164.312(c)(1)) | | See Exhibit F | | |
| PHI | 01 | 44 | PHI.01.44 | PHI and Privacy, Notification in the Case of Breach of Unsecured PHI (§ 164.410) | ePHI Documentation Review | See Exhibit F | | |
| PHI | 01 | 45 | PHI.01.45 | PHI and Privacy, Notification in the Case of Breach of Unsecured PHI (§ 164.410) | | See Exhibit F | | |
| PHI | 01 | 46 | PHI.01.46 | PHI and Privacy, Notification in the Case of Breach of Unsecured PHI (§ 164.410) | Timeliness of Notification | See Exhibit F | | |
| PHI | 01 | 47 | PHI.01.47 | PHI and Privacy, Person or Entity Authentication (§ 164.312(d)) | | See Exhibit F | | |
| PHI | 01 | 48 | PHI.01.48 | PHI and Privacy, Person or Entity Authentication (§ 164.312(d)) | Mechanism to Authenticate ePHI | See Exhibit F | | |
| PHI | 01 | 49 | PHI.01.49 | PHI and Privacy, Policies and Procedures and Documentation Requirements (§ 164.316) | Policies and Procedures | See Exhibit F | | |

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| PHI | 01 | 50 | PHI.01.50 | PHI and Privacy, Policies and Procedures and Documentation Requirements (§ 164.316) | Documentation | See Exhibit F | | |
| PHI | 01 | 51 | PHI.01.51 | PHI and Privacy, Policies and Procedures and Documentation Requirements (§ 164.316) | Time Limit | See Exhibit F | | |
| PHI | 01 | 52 | PHI.01.52 | PHI and Privacy, Policies and Procedures and Documentation Requirements (§ 164.316) | Documentation Availability | See Exhibit F | | |
| PHI | 01 | 53 | PHI.01.53 | PHI and Privacy, Privacy Requirements | | See Exhibit F | | |
| PHI | 01 | 54 | PHI.01.54 | PHI and Privacy, Requirements for Group Health Plans (§ 164.314(b)(1)) | | See Exhibit F | | |
| PHI | 01 | 55 | PHI.01.55 | PHI and Privacy, Security Awareness and Training (§ 164.308(a)(5)) | | See Exhibit F | | |
| PHI | 01 | 56 | PHI.01.56 | PHI and Privacy, Security Awareness and Training (§ 164.308(a)(5)) | | See Exhibit F | | |
| PHI | 01 | 57 | PHI.01.57 | PHI and Privacy, Security Awareness and Training (§ 164.308(a)(5)) | Security Reminders | See Exhibit F | | |
| PHI | 01 | 58 | PHI.01.58 | PHI and Privacy, Security Awareness and Training (§ 164.308(a)(5)) | Protection from Malicious Software | See Exhibit F | | |
| PHI | 01 | 59 | PHI.01.59 | PHI and Privacy, Security Awareness and Training (§ 164.308(a)(5)) | Login Monitoring | See Exhibit F | | |
| PHI | 01 | 60 | PHI.01.60 | PHI and Privacy, Security Incident Procedures (§ 164.308(a)(6)) | Password Management | See Exhibit F | | |
| PHI | 01 | 61 | PHI.01.61 | PHI and Privacy, Security Incident Procedures (§ 164.308(a)(6)) | | See Exhibit F | | |
| PHI | 01 | 62 | PHI.01.62 | PHI and Privacy, Security Management Process (§ 164.308(a)(1)) | | See Exhibit F | | |
| PHI | 01 | 63 | PHI.01.63 | PHI and Privacy, Security Management Process (§ 164.308(a)(1)) | | See Exhibit F | | |
| PHI | 01 | 64 | PHI.01.64 | PHI and Privacy, Security Management Process (§ 164.308(a)(1)) | Risk Analysis | See Exhibit F | | |
| PHI | 01 | 65 | PHI.01.65 | PHI and Privacy, Security Management Process (§ 164.308(a)(1)) | Risk Management | See Exhibit F | | |
| PHI | 01 | 66 | PHI.01.66 | PHI and Privacy, Security Management Process (§ 164.308(a)(1)) | Sanction Policy | See Exhibit F | | |
| PHI | 01 | 67 | PHI.01.67 | PHI and Privacy, Security Requirements | | See Exhibit F | | |
| PHI | 01 | 68 | PHI.01.68 | PHI and Privacy, Transmission Security (§ 164.312(e)(1)) | | See Exhibit F | | |
| PHI | 01 | 69 | PHI.01.69 | PHI and Privacy, Transmission Security (§ 164.312(e)(1)) | | See Exhibit F | | |
| PHI | 01 | 70 | PHI.01.70 | PHI and Privacy, Transmission Security (§ 164.312(e)(1)) | Integrity Controls | See Exhibit F | | |
| PHI | 01 | 71 | PHI.01.71 | PHI and Privacy, Uses and Disclosures: Organizational requirements (§ 164.504 (e)(2)) | | See Exhibit F | | |
| PHI | 01 | 72 | PHI.01.72 | PHI and Privacy, Uses and Disclosures: Organizational requirements (§ 164.504 (e)(2)) | | See Exhibit F | | |

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| PHI | 01 | 73 | PHI.01.73 | PHI and Privacy, Uses and Disclosures: Organizational requirements (§ 164.504 (e)(2)) | | See Exhibit F | | |
| PHI | 01 | 74 | PHI.01.74 | PHI and Privacy, Uses and Disclosures: Organizational requirements (§ 164.504 (e)(2)) | | See Exhibit F | | |
| PHI | 01 | 75 | PHI.01.75 | PHI and Privacy, Uses and Disclosures: Organizational requirements (§ 164.504 (e)(2)) | | See Exhibit F | | |
| PHI | 01 | 76 | PHI.01.76 | PHI and Privacy, Uses and Disclosures: Organizational requirements (§ 164.504 (e)(2)) | | See Exhibit F | | |
| PHI | 01 | 77 | PHI.01.77 | PHI and Privacy, Uses and Disclosures: Organizational requirements (§ 164.504 (e)(2)) | | See Exhibit F | | |
| PHI | 01 | 78 | PHI.01.78 | PHI and Privacy, Uses and Disclosures: Organizational requirements (§ 164.504 (e)(2)) | | See Exhibit F | | |
| PHI | 01 | 79 | PHI.01.79 | PHI and Privacy, Uses and Disclosures: Organizational requirements (§ 164.504 (e)(2)) | | See Exhibit F | | |
| PHI | 01 | 80 | PHI.01.80 | PHI and Privacy, Uses and Disclosures: Organizational requirements (§ 164.504 (e)(2)) | | See Exhibit F | | |
| PHI | 01 | 81 | PHI.01.81 | PHI and Privacy, Uses and Disclosures: Organizational requirements (§ 164.504 (e)(2)) | | See Exhibit F | | |
| PHI | 01 | 82 | PHI.01.82 | PHI and Privacy, Workforce Security (§ 164.308(a)(3)) | | See Exhibit F | | |
| PHI | 01 | 83 | PHI.01.83 | PHI and Privacy, Workforce Security (§ 164.308(a)(3)) | | See Exhibit F | | |
| PHI | 01 | 84 | PHI.01.84 | PHI and Privacy, Workforce Security (§ 164.308(a)(3)) | Authorization and or Supervision | See Exhibit F | | |
| PHI | 01 | 85 | PHI.01.85 | PHI and Privacy, Workforce Security (§ 164.308(a)(3)) | Workforce Clearance Procedures | See Exhibit F | | |
| PHI | 01 | 86 | PHI.01.86 | PHI and Privacy, Workstation Security (§ 164.310(c)) | | See Exhibit F | | |
| PHI | 01 | 87 | PHI.01.87 | PHI and Privacy, Workstation Use (§ 164.310(b)) | | See Exhibit F | | |

## SOV Consolidated Non-Functional Requirements Traceability Matrix (RTM)

### IRS 1075

| Base | Level | Sub | Req ID New | Focus | Specifics | Requirement Description | Requirement Fulfilled? | Notes | Evidence |
|---|---|---|---|---|---|---|---|---|---|
| IRS | 01 | 0 | IRS.01.0 | IRS 1075 | Audit | The audit trail shall capture all successful login and logoff attempts. | | | |
| IRS | 01 | 1 | IRS.01.1 | IRS 1075 | Audit | The audit trail shall be protected from unauthorized access, use, deletion or modification. | Ensure CIA and protect against threats | | |
| IRS | 01 | 2 | IRS.01.2 | IRS 1075 | Audit | The audit trail shall be restricted to personnel routinely responsible for performing security audit functions. | Reasonably consider factors in security compliance | | |
| IRS | 01 | 3 | IRS.01.3 | IRS 1075 | Audit | The audit trail shall capture all actions, connections and requests performed by privileged functions. | Covered Entities CEs must comply with standards | | |
| IRS | 01 | 4 | IRS.01.4 | IRS 1075 | Audit | The audit trail shall capture all actions, connections and requests performed by privileged users (a user who, by virtue of function, and/or seniority, has been allocated powers within the computer system, which are significantly greater than those available to the majority of users. Such persons will include, for example, the system administrator(s) and network administrator(s) who are responsible for keeping the system available and may need powers to create new user profiles as well as add to or amend the powers and access rights of existing users). | Required and Addressable Implementation Specification requirements | | |
| IRS | 01 | 5 | IRS.01.5 | IRS 1075 | Audit | The audit trail shall capture all changes to logical access control authorities (e.g., rights, permissions). | Ongoing review and modification of security measures | | |
| IRS | 01 | 6 | IRS.01.6 | IRS 1075 | Audit | The audit trail shall capture all identification and authentication attempts. | | | |
| IRS | 01 | 7 | IRS.01.7 | IRS 1075 | Audit | The audit trail shall capture all system changes with the potential to compromise the integrity of audit policy configurations, security policy configurations and audit record generation services. | P&P to manage security violations | | |
| IRS | 01 | 8 | IRS.01.8 | IRS 1075 | Audit | The audit trail shall capture all unsuccessful login and authorization attempts. | Conduct vulnerability assessment | | |
| IRS | 01 | 9 | IRS.01.9 | IRS 1075 | Audit | The audit trail shall capture command line changes, batch file changes and queries made to the system (e.g., operating system, application, database). | Implement security measures to reduce risk of security breaches | | |
| IRS | 01 | 10 | IRS.01.10 | IRS 1075 | Audit | The audit trail shall capture modifications to administrator account(s) and administrator group account(s) including: i) escalation of user account privileges commensurate with administrator-equivalent account(s); and ii) adding or deleting users from the administrator group account(s). | Worker sanction for P&P violations | | |
| IRS | 01 | 11 | IRS.01.11 | IRS 1075 | Audit | The audit trail shall capture system startup and shutdown functions. | Procedures to review system activity | | |
| IRS | 01 | 12 | IRS.01.12 | IRS 1075 | Audit | The audit trail shall capture the creation, modification and deletion of objects including files, directories and user accounts. | Identify security official responsible for P&P | | |
| IRS | 01 | 13 | IRS.01.13 | IRS 1075 | Audit | The audit trail shall capture the creation, modification and deletion of user account and group account privileges. | Implement P&P to ensure appropriate PHI access | | |
| IRS | 01 | 14 | IRS.01.14 | IRS 1075 | Audit | The audit trail shall capture the creation, modification and deletion of user accounts and group accounts. | Authorization/supervision for PHI access | | |
| IRS | 01 | 15 | IRS.01.15 | IRS 1075 | Audit | The audit trail shall capture the enabling or disabling of audit report generation services. | Procedures to ensure appropriate PHI access | | |
| IRS | 01 | 16 | IRS.01.16 | IRS 1075 | Audit | The audit trail shall capture: i) the date of the system event; ii) the time of the system event; iii) the type of system event initiated; and iv) the user account, system account, service or process responsible for initiating the system event. | Procedures to terminate PHI access | | |
| IRS | 01 | 17 | IRS.01.17 | IRS 1075 | Password | Passwords shall be a minimum length of 8 characters in a combination of alpha and numeric or special characters. | P&P to authorize access to PHI | | |
| IRS | 01 | 18 | IRS.01.18 | IRS 1075 | Password | Users shall commit passwords to memory, avoid writing passwords down and never disclose passwords to others (e.g., with a co-worker in order to share files) | P&P to separate PHI from other operations | | |
| IRS | 01 | 19 | IRS.01.19 | IRS 1075 | Password | Users shall be prohibited from using their last six passwords to deter reuse of the same password. | P&P to authorize access to PHI | | |
| IRS | 01 | 20 | IRS.01.20 | IRS 1075 | Password | Users shall be prohibited from changing their passwords for at least 15 days after a recent change. Meaning, the minimum password age limit shall be 15 days after a recent password change. | P&P to grant access to PHI | | |
| IRS | 01 | 21 | IRS.01.21 | IRS 1075 | Password | User account lockout feature shall disable the user account after 3 unsuccessful login attempts. | Training program for workers and managers | | |
| IRS | 01 | 22 | IRS.01.22 | IRS 1075 | Password | Use of dictionary words, popular phrases, or obvious combinations of letters and numbers in passwords shall be prohibited when possible. Obvious combinations of letters and numbers include first names, last names, initials, pet names, user accounts spelled backwards, repeating characters, consecutive numbers, consecutive letters, and other predictable combinations and permutations. | Distribute periodic security updates | | |
| IRS | 01 | 23 | IRS.01.23 | IRS 1075 | Password | The information system shall routinely prompt users to change their passwords within 5-14 days before such password expires. | Procedures to guard against malicious software | | |
| IRS | 01 | 24 | IRS.01.24 | IRS 1075 | Password | System initialization (boot) settings shall be password-protected. | Procedures and monitoring of log-in attempts | | |
| IRS | 01 | 25 | IRS.01.25 | IRS 1075 | Password | Privileged users shall be able to override the minimum password age limit for users when necessary to perform required job functions. | Procedures for password management | | |
| IRS | 01 | 26 | IRS.01.26 | IRS 1075 | Password | Passwords shall not be automated through function keys, scripts or other methods where passwords may be stored on the system. | P&P to manage security incidents | | |
| IRS | 01 | 27 | IRS.01.27 | IRS 1075 | Password | Passwords shall be systematically disabled after 90 days of inactivity to reduce the risk of compromise through guessing, password cracking or other attack and penetration methods. | Mitigate and document security incidents | | |
| IRS | 01 | 28 | IRS.01.28 | IRS 1075 | Password | Passwords shall be changed every 90 days, at a minimum, for standard user accounts to reduce the risk of compromise through guessing, password cracking or other attack & penetration methods. | Emergency response P&P | | |
| IRS | 01 | 29 | IRS.01.29 | IRS 1075 | Password | Passwords shall be changed every 60 days, at a minimum, for privileged user accounts to reduce the risk of compromise through guessing, password cracking or other attack and penetration methods. | Data backup planning & procedures | | |
| IRS | 01 | 30 | IRS.01.30 | IRS 1075 | Password | Password changes for standard and privileged users shall be systematically enforced where possible. | Data recovery planning & procedures | | |
| IRS | 01 | 31 | IRS.01.31 | IRS 1075 | Password | Null passwords shall be prohibited to reduce the risk of compromise through rogue enticement techniques or other attack and penetration methods. | Business continuity procedures | | |
| IRS | 01 | 32 | IRS.01.32 | IRS 1075 | Password | Default vendor passwords shall be changed upon successful installation of the information system product. | Contingency planning periodic testing procedures | | |
| IRS | 01 | 33 | IRS.01.33 | IRS 1075 | Password | Clear-text representation of passwords shall be suppressed (blotted out) when entered at the login screen. | Prioritize data and system criticality for contingency planning | | |
| IRS | 01 | 34 | IRS.01.34 | IRS 1075 | Password | Account lockout duration shall be permanent until an authorized system administrator reinstates the user account. | Periodic security evaluation | | |
| IRS | 01 | 35 | IRS.01.35 | IRS 1075 | General | The IRS Safeguards Report shall be correctly completed and requirements addressed if required | CE implement BACs to ensure safeguards | | |
| IRS | 01 | 37 | IRS.01.37 | IRS 1075 | Section 9.18.14 Protecting FTI in a Cloud Computing Environment - Technical Requirements | The system architecture is configured as a three-tier architecture with physically separate systems that provide layered security of the FTI and access to the database through the application is limited. | | | |
| IRS | 01 | 38 | IRS.01.38 | IRS 1075 | Section 9.18.14 Protecting FTI in a Cloud Computing Environment - Technical Requirements | Each system within the architecture that receives, processes, stores or transmits FTI to an external customer through the web portal is hardened in accordance with the requirements of Publication 1075 and is subject to frequent vulnerability testing. | P&P to limit access to systems and facilities | | |

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| IRS | 01 | 39 | IRS.01.39 | IRS 1075 | Section 9.18.14 Protecting FTI in a Cloud Computing Environment - Technical Requirements | Hosting Provider will adhere to IRS 1075 Section 9.18.9 ,Web Portal: To utilize a web portal that provides FTI over the Internet to a customer,theagency must meet the following requirements:.The system architecture is configured as a three-tierarchitecture with physically separate systems that provide layered security of the FTI and access to the database through the application is limited.. Each system within the architecture that receives, processes, stores or transmits FTI to an external customer through the web portal is hardened in accordance with the requirements of Publication 1075 and is subject to frequent vulnerability testing.Access to FTI via the web portal requires a strong identity verification process. The authentication must use aminimum of two pieces of informational though more than two are recommended to verify the identity. One of the authentication elements must bea shared secret only known to the parties involved and issued by the agency directly to the customer. Examples of shared secrets include: a unique username, PIN number, password or passphrase issued by the agency to the customer through asecure mechanism. Case number does not meet the standard as a shared secret because that case number is likely shown on all documents the customer receives and does not provide assurance that it is only known to the parties involved in the communication. | Procedures to support emergency operations and recovery | | |
| IRS | 01 | 40 | IRS.01.40 | IRS 1075 | Section 9.18.14 Protecting FTI in a Cloud Computing Environment - Technical Requirements | Each system within the architecture that receives, processes, stores, or transmits FTI to an external customer through the web portal is hardened in accordance with IRS Publication 1075 policy. The Publication 1075 policy can be met by utilizing the Safeguards Computer Security Evaluation Matrix (SCSEM) to configure the security settings for the applicable operating system of the web server, application server and database server. These SCSEMs are available for download from the IRS Safeguards web site. | P&P to safeguard equipment and facilities | | |
| IRS | 01 | 41 | IRS.01.41 | IRS 1075 | Section 9.18.14 Protecting FTI in a Cloud Computing Environment - Technical Requirements | Prior to implementing the web portal, the Hosting Provider must conduct a thorough penetration test of the web portal environment to ensure the FTI is not vulnerable to internal and external threats. The results of the penetration test should be shared with the IRS Office of Safeguards, along with a corrective action plan for addressing vulnerabilities identified. | Facility access procedures for personnel | | |
| IRS | 01 | 42 | IRS.01.42 | IRS 1075 | Section 9.18.14 Protecting FTI in a Cloud Computing Environment - Technical Requirements | Additionally, when FTI is provided to customers through a web portal, the required frequency with which agencies conduct vulnerability scanning of the web portal architecture is increased to monthly to allow for more proactive vulnerability management of systems that provide FTI over the Internet. | P&P to document security-related repairs and modifications | | |
| IRS | 01 | 43 | IRS.01.43 | IRS 1075 | Section 9.18.14 Protecting FTI in a Cloud Computing Environment - Technical Requirements | — | P&P to specify workstation environment & use | | |
| IRS | 01 | 44 | IRS.01.44 | IRS 1075 | Section 9.18.14 Protecting FTI in a Cloud Computing Environment - Technical Requirements | If external customers have the ability to access FTI through the web portal, a strong authentication mechanism must be used to authenticate those external customers to the system. The authentication must use at least two pieces of information to verify the identity, one of which must be a shared secret only known to the parties involved, and issued by the agency directly to the customer. Examples of shared secrets include: a unique username, PIN number, password or passphrase issued by the agency to the customer through a secure mechanism. Case number does not meet the standard as a shared secret because that case number is likely on all case documents the customer receives and does not provide assurance that it's only known to the parties involved in the communication. | Physical safeguards for workstation access | | |
| IRS | 01 | 45 | IRS.01.45 | IRS 1075 | Section 9.18.14 Protecting FTI in a Cloud Computing Environment - Technical Requirements | Two factor authentication is applicable to employees and contractors, including system and application administrators with access to FTI through a web portal from a network external to the Hosting Provider's network. This does not apply to the Hosting Provider's customers who access FTI through a customer service web portal. All Hosting Provider employees and contractors accessing FTI data remotely from an external network through an Internet web portal are required to be authenticated by an application that utilizes a two-factor authentication mechanism. Two-factor authentication (strong authentication) is defined as using at least two out of the three authentication factors: (i) something you know (e.g. password/PIN); (ii) something you have (e.g., cryptographic identification device, token); or (iii) something you are (e.g., biometric). Using strong authentication provides more protection for FTI than a simple username and password can provide. | P&P to govern receipt and removal of hardware and media | | |
| IRS | 01 | 46 | IRS.01.46 | IRS 1075 | Section 9.18.14 Protecting FTI in a Cloud Computing Environment - Technical Requirements | Data Isolation. Software, data, and services that receive, transmit, process, or store FTI must be isolated within the cloud environment so that tenants sharing physical space cannot access their neighbors' physically co-located data and applications. | P&P to manage media and equipment disposal | | |
| IRS | 01 | 47 | IRS.01.47 | IRS 1075 | Section 9.18.14 Protecting FTI in a Cloud Computing Environment - Technical Requirements | Service Level Agreements (SLA). The Hosting Provider must establish security policies and procedures based on IRS Publication 1075 for how FTI is stored, handled, and accessed inside the cloud through a legally binding contract or Service Level Agreement (SLA) with their third party cloud provider. | P&P to remove PHI from media and equipment | | |
| IRS | 01 | 48 | IRS.01.48 | IRS 1075 | Section 9.18.14 Protecting FTI in a Cloud Computing Environment - Technical Requirements | Data Encryption in Transit. FTI must be encrypted in transit within the cloud environment. All mechanisms used to encrypt FTI must be FIPS 140-2 compliant, and operate utilizing the FIPS 140-2 compliant module. This requirement must be included in the SLA. | Document hardware and media movement | | |
| IRS | 01 | 49 | IRS.01.49 | IRS 1075 | Section 9.18.14 Protecting FTI in a Cloud Computing Environment - Technical Requirements | Data Encryption at Rest. FTI must be encrypted while at rest in the cloud. All mechanisms used to encrypt FTI must be FIPS 140-2 compliant, and operate utilizing the FIPS 140-2 compliant module. This requirement must be included in the SLA. | Backup PHI before moving equipment | | |

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| IRS | 01 | 50 | IRS.01.50 | IRS 1075 | Section 9.18.14 Protecting FTI in a Cloud Computing Environment - Technical Requirements | | | | |
| IRS | 01 | 52 | IRS.01.52 | IRS 1075 | Section 9.18.12 Protecting FTI in Virtual Environments - Technical Requirements | When FTI is stored in a shared location, the Hosting Provider must have policies in place to restrict access to FTI to authorized users. | Assign unique IDs to support tracking | | |
| IRS | 01 | 53 | IRS.01.53 | IRS 1075 | Section 9.18.12 Protecting FTI in Virtual Environments - Technical Requirements | Programs that control the hypervisor should be secured and restricted to authorized administrators only. | Procedures to support emergency access | | |
| IRS | 01 | 54 | IRS.01.54 | IRS 1075 | Section 9.18.12 Protecting FTI in Virtual Environments - Technical Requirements | FTI data transmitted via hypervisor management communication systems on untrusted networks must be encrypted using FIPS-approved methods, provided by either the virtualization solution or third party-solution, such as a virtual private network (VPN) that encapsulates the management traffic. | Session termination mechanisms | | |
| IRS | 01 | 55 | IRS.01.55 | IRS 1075 | Section 9.18.12 Protecting FTI in Virtual Environments - Technical Requirements | Separation between virtual machines (VMs) must be enforced, and functions which allow one VM to share data with the hypervisor or another VM, such as clipboard sharing or shared disks, must be disabled. | Mechanism for encryption of stored PHI | | |
| IRS | 01 | 56 | IRS.01.56 | IRS 1075 | Section 9.18.12 Protecting FTI in Virtual Environments - Technical Requirements | Virtualization providers must be able to monitor for threats and other activity that is occurring within the virtual environment. This includes being able to monitor the movement of FTI into and out of the virtual environment. | Procedures and mechanisms for monitoring system activity | | |
| IRS | 01 | 57 | IRS.01.57 | IRS 1075 | Section 9.18.12 Protecting FTI in Virtual Environments - Technical Requirements | The VMs and hypervisor/ host OS software for each system within the virtual environment that receives, processes, stores or transmits FTI must be hardened in accordance with the requirements of Publication 1075 and be subject to frequent vulnerability testing. | P&P to safeguard PHI unauthorized alteration | | |
| IRS | 01 | 58 | IRS.01.58 | IRS 1075 | Section 9.18.12 Protecting FTI in Virtual Environments - Technical Requirements | Special VM functions available to system administrators in a virtualized environment that can leverage the shared memory space in a virtual environment between the hypervisor and VM should be disabled. | Mechanisms to corroborate PHI not altered | | |
| IRS | 01 | 59 | IRS.01.59 | IRS 1075 | Section 9.18.12 Protecting FTI in Virtual Environments - Technical Requirements | Virtual systems are configured to prevent FTI from being dumped outside of the VM when system errors occur. | Procedures to verify identities | | |
| IRS | 01 | 60 | IRS.01.60 | IRS 1075 | Section 9.18.12 Protecting FTI in Virtual Environments - Technical Requirements | Vulnerability assessment must be performed on systems in a virtualized environment prior to system implementation. | Measures to guard against unauthorized access to transmitted PHI | | |
| IRS | 01 | 61 | IRS.01.61 | IRS 1075 | Section 9.18.12 Protecting FTI in Virtual Environments - Technical Requirements | Backups (virtual machine snapshot) must be properly secured and must be stored in a logical location where the backup is only accessible to those with a need to know. | Measures to ensure integrity of PHI on transmission | | |
| IRS | 01 | 63 | IRS.01.63 | IRS 1075 | Section 9.18.13 Protecting FTI in VOIP Networks - Technical Requirements | VoIP traffic that contains FTI should be segmented off from non-VoIP traffic via a virtual Local Area Network (vLAN) or other segmentation method. If complete segmentation is not feasible, the Hosting Provider must have compensating controls in place and properly applied which restrict access to VoIP traffic which contains FTI. | | | |
| IRS | 01 | 64 | IRS.01.64 | IRS 1075 | Section 9.18.13 Protecting FTI in VOIP Networks - Technical Requirements | When FTI is in-transit across the network (either Internet or state Hosting Provider's network) the VoIP traffic must be encrypted using a NIST-approved method operating in a NIST-approved mode. | CE must ensure BA safeguards PHI | | |
| IRS | 01 | 65 | IRS.01.65 | IRS 1075 | Section 9.18.13 Protecting FTI in VOIP Networks - Technical Requirements | VoIP network hardware (servers, routers, switches, firewalls) must be physically protected in accordance with the minimum protection standards for physical security outlined in IRS Publication 1075, section 4.0, Secure Storage. | BACs must contain security language | | |
| IRS | 01 | 66 | IRS.01.66 | IRS 1075 | Section 9.18.13 Protecting FTI in VOIP Networks - Technical Requirements | Each system within the Hosting Provider's network that transmits FTI to an external customer through the VoIP network is hardened in accordance with the requirements of Publication 1075 and is subject to frequent vulnerability testing. | Plan documents must reflect security safeguards | | |
| IRS | 01 | 67 | IRS.01.67 | IRS 1075 | Section 9.18.13 Protecting FTI in VOIP Networks - Technical Requirements | VoIP-ready firewalls must be used to filter VoIP traffic on the network. | Plan sponsor to implement safeguards as appropriate | | |

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|---|---|---|---|---|---|---|---|---|---|
| IRS | 01 | 68 | IRS.01.68 | IRS 1075 | Section 9.18.13 Protecting FTI in VOIP Networks - Technical Requirements | Security testing must be conducted on the VoIP system prior to implementation with FTI and annually thereafter. | Security measures to separate PHI from plan sponsor and plan | | |
| IRS | 01 | 69 | IRS.01.69 | IRS 1075 | Section 9.18.13 Protecting FTI in VOIP Networks - Technical Requirements | VoIP phones must be logically protected and agencies must be able to track and audit all FTI-applicable conversations and access. | Ensure subcontractors safeguard PHI | | |
| IRS | 01 | 70 | IRS.01.70 | IRS 1075 | Section 9.18.13 Protecting FTI in VOIP Networks - Technical Requirements | Soft-phone systems, i.e. software on user's computer to implement VoIP, should not be used with VoIP networks that transmit FTI. | Plan sponsors report breaches to health plan | | |
| IRS | 01 | 71 | IRS.01.71 | IRS 1075 | Section 9.18.13 Protecting FTI in VOIP Networks - Technical Requirements | Consider employing a variety of specific logical controls such as: authentication at each transition point, or at the device level, such as Media Access Control (MAC). | P&P to ensure safeguards to PHI | | |
| IRS | 01 | 72 | IRS.01.72 | IRS 1075 | Section 9.18.13 Protecting FTI in VOIP Networks - Technical Requirements | Use static IP addresses for the phones. | Document P&P and actions & activities | | |
| IRS | 01 | 73 | IRS.01.73 | IRS 1075 | Section 9.18.13 Protecting FTI in VOIP Networks - Technical Requirements | Employ an intrusion detection system that can identify and filter packets, allowing only traffic from a legitimate DHCP source. | Retain documentation for 6 years | | |
| IRS | 01 | 75 | IRS.01.75 | IRS 1075 | Contract Language | Contract Language for General or Technical Services. In performance of this contract, the Contractor agrees to comply with and assume responsibility for compliance by his or her employees with the following requirements: | Periodic review and updates to changing needs | | |
| IRS | 01 | 76 | IRS.01.76 | IRS 1075 | Contract Language | All work will be performed under the supervision of the contractor or the contractor's responsible employees. | | | |
| IRS | 01 | 77 | IRS.01.77 | IRS 1075 | Contract Language | Any Federal tax returns or return information (hereafter referred to as returns or return information) made available shall be used only for the purpose of carrying out the provisions of this contract. Information contained in such material shall be treated as confidential and shall not be divulged or made known in any manner to any person except as may be necessary in the performance of this contract. Inspection by or disclosure to anyone other than an officer or employee of the contractor is prohibited | | | |
| IRS | 01 | 78 | IRS.01.78 | IRS 1075 | Contract Language | All returns and return information will be accounted for upon receipt and properly stored before, during, and after processing. In addition, all related output and products will be given the same level of protection as required for the source material. | | | |
| IRS | 01 | 79 | IRS.01.79 | IRS 1075 | Contract Language | No work involving returns and return information furnished under this contract will be subcontracted without prior written approval of the IRS. | | | |
| IRS | 01 | 80 | IRS.01.80 | IRS 1075 | Contract Language | The contractor will maintain a list of employees authorized access. Such list will be provided to the Hosting Provider and, upon request, to the IRS reviewing office. | | | |
| IRS | 01 | 82 | IRS.01.82 | IRS 1075 | Contract Language | The Hosting Provider will have the right to void the contract if the contractor fails to provide the safeguards described above. | | | |
| IRS | 01 | 81 | IRS.01.81 | IRS 1075 | | Hosting Provider must maintain their authorization to access FTI through annual recertification. The initial certification and recertification must be documented and placed in the Hosting Provider's files for review. As part of the certification and at least annually afterwards, contractors should be advised of the provisions of IRC Sections 7431, 7213, and 7213A (see Exhibit 6, IRC Sec. 7431 Civil Damages for Unauthorized Disclosure of Returns and Return Information and Exhibit 5, IRC Sec. 7213 Unauthorized Disclosure of Information). The training provided before the initial certification and annually thereafter must also cover the incident response policy and procedure for reporting unauthorized disclosures and data breaches. | | | |

## SOV Consolidated Non-Functional Requirements Traceability Matrix (RTM)

PCI-DSS

| Base | Level | Sub | Req ID New | Focus | Specifics | Requirement Description | Notes | Evidence |
|---|---|---|---|---|---|---|---|---|
| NA | NA | NA | NA | 1 | Remove sensitive authentication data and limit data retention. | See Exhibit F | | |
| NA | NA | NA | NA | 2 | Protect the perimeter, internal, and wireless networks. | See Exhibit F | | |
| NA | NA | NA | NA | 3 | Secure payment card applications. | See Exhibit F | | |
| NA | NA | NA | NA | 4 | Monitor and control access to your systems. | See Exhibit F | | |
| NA | NA | NA | NA | 5 | Protect stored cardholder data. | See Exhibit F | | |
| NA | NA | NA | NA | 6 | Finalize remaining compliance efforts, and ensure all controls are in place. | See Exhibit F | | |
| PCI | 1 | 1 | PCI.1.1 | PCI-DSS | 6 | See Exhibit F | | |
| PCI | 1 | 1.1 | PCI.1.1.1 | PCI-DSS | | See Exhibit F | | |
| PCI | 1 | 1.2 | PCI.1.1.2 | PCI-DSS | 1 | See Exhibit F | | |
| PCI | 1 | 1.3 | PCI.1.1.3 | PCI-DSS | 2 | See Exhibit F | | |
| PCI | 1 | 1.4 | PCI.1.1.4 | PCI-DSS | 6 | See Exhibit F | | |
| PCI | 1 | 1.5 | PCI.1.1.5 | PCI-DSS | 2 | See Exhibit F | | |
| PCI | 1 | 1.6 | PCI.1.1.6 | PCI-DSS | 6 | See Exhibit F | | |
| PCI | 1 | 2 | PCI.1.2 | PCI-DSS | 2 | See Exhibit F | | |
| PCI | 1 | 2.1 | PCI.1.2.1 | PCI-DSS | | See Exhibit F | | |
| PCI | 1 | 2.2 | PCI.1.2.2 | PCI-DSS | 2 | See Exhibit F | | |
| PCI | 1 | 2.3 | PCI.1.2.3 | PCI-DSS | 2 | See Exhibit F | | |
| PCI | 1 | 3 | PCI.1.3 | PCI-DSS | 2 | See Exhibit F | | |
| PCI | 1 | 3.1 | PCI.1.3.1 | PCI-DSS | | See Exhibit F | | |
| PCI | 1 | 3.2 | PCI.1.3.2 | PCI-DSS | 2 | See Exhibit F | | |
| PCI | 1 | 3.3 | PCI.1.3.3 | PCI-DSS | 2 | See Exhibit F | | |
| PCI | 1 | 3.4 | PCI.1.3.4 | PCI-DSS | 2 | See Exhibit F | | |
| PCI | 1 | 3.5 | PCI.1.3.5 | PCI-DSS | 2 | See Exhibit F | | |
| PCI | 1 | 3.6 | PCI.1.3.6 | PCI-DSS | 2 | See Exhibit F | | |
| PCI | 1 | 3.7 | PCI.1.3.7 | PCI-DSS | 2 | See Exhibit F | | |
| PCI | 1 | 3.8 | PCI.1.3.8 | PCI-DSS | 2 | See Exhibit F | | |
| PCI | 1 | 4 | PCI.1.4 | PCI-DSS | 2 | See Exhibit F | | |
| PCI | 2 | 0 | PCI.2.0 | PCI-DSS | | See Exhibit F | | |
| PCI | 2 | 1 | PCI.2.1 | PCI-DSS | 2 | See Exhibit F | | |
| PCI | 2 | 1.1 | PCI.2.1.1 | PCI-DSS | 2 | See Exhibit F | | |
| PCI | 2 | 2 | PCI.2.2 | PCI-DSS | 3 | See Exhibit F | | |
| PCI | 2 | 2.1 | PCI.2.2.1 | PCI-DSS | 3 | See Exhibit F | | |
| PCI | 2 | 2.2 | PCI.2.2.2 | PCI-DSS | 3 | See Exhibit F | | |
| PCI | 2 | 2.3 | PCI.2.2.3 | PCI-DSS | 3 | See Exhibit F | | |
| PCI | 2 | 2.4 | PCI.2.2.4 | PCI-DSS | 3 | See Exhibit F | | |
| PCI | 2 | 3 | PCI.2.3 | PCI-DSS | 2 | See Exhibit F | | |
| PCI | 2 | 4 | PCI.2.4 | PCI-DSS | 3 | See Exhibit F | | |
| PCI | 3 | 0 | PCI.3.0 | PCI-DSS | | See Exhibit F | | |
| PCI | 3 | 1 | PCI.3.1 | PCI-DSS | 1 | See Exhibit F | | |
| PCI | 3 | 1.1 | PCI.3.1.1 | PCI-DSS | 1 | See Exhibit F | | |

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|---|---|---|---|---|---|---|---|---|
| PCI | 3 | 2 | PCI.3.2 | PCI-DSS | 1 | See Exhibit F | | |
| PCI | 3 | 2.1 | PCI.3.2.1 | PCI-DSS | 1 | See Exhibit F | | |
| PCI | 3 | 2.2 | PCI.3.2.2 | PCI-DSS | 1 | See Exhibit F | | |
| PCI | 3 | 2.3 | PCI.3.2.3 | PCI-DSS | 1 | See Exhibit F | | |
| PCI | 3 | 3 | PCI.3.3 | PCI-DSS | 5 | See Exhibit F | | |
| PCI | 3 | 4 | PCI.3.4 | PCI-DSS | 5 | See Exhibit F | | |
| PCI | 3 | 4.1 | PCI.3.4.1 | PCI-DSS | 5 | See Exhibit F | | |
| PCI | 3 | 5 | PCI.3.5 | PCI-DSS | 5 | See Exhibit F | | |
| PCI | 3 | 5.1 | PCI.3.5.1 | PCI-DSS | 5 | See Exhibit F | | |
| PCI | 3 | 5.2 | PCI.3.5.2 | PCI-DSS | 5 | See Exhibit F | | |
| PCI | 3 | 6 | PCI.3.6 | PCI-DSS | 5 | See Exhibit F | | |
| PCI | 3 | 6.1 | PCI.3.6.1 | PCI-DSS | 5 | See Exhibit F | | |
| PCI | 3 | 6.2 | PCI.3.6.2 | PCI-DSS | 5 | See Exhibit F | | |
| PCI | 3 | 6.3 | PCI.3.6.3 | PCI-DSS | 5 | See Exhibit F | | |
| PCI | 3 | 6.4 | PCI.3.6.4 | PCI-DSS | 5 | See Exhibit F | | |
| PCI | 3 | 6.5 | PCI.3.6.5 | PCI-DSS | 5 | See Exhibit F | | |
| PCI | 3 | 6.6 | PCI.3.6.6 | PCI-DSS | 5 | See Exhibit F | | |
| PCI | 3 | 6.7 | PCI.3.6.7 | PCI-DSS | 5 | See Exhibit F | | |
| PCI | 3 | 6.8 | PCI.3.6.8 | PCI-DSS | 5 | See Exhibit F | | |
| PCI | 4 | 0 | PCI.4.0 | PCI-DSS | | See Exhibit F | | |
| PCI | 4 | 1 | PCI.4.1 | PCI-DSS | 2 | See Exhibit F | | |
| PCI | 4 | 1.1 | PCI.4.1.1 | PCI-DSS | 2 | See Exhibit F | | |
| PCI | 4 | 2 | PCI.4.2 | PCI-DSS | 2 | See Exhibit F | | |
| PCI | 5 | 0 | PCI.5.0 | PCI-DSS | | See Exhibit F | | |
| PCI | 5 | 1 | PCI.5.1 | PCI-DSS | 2 | See Exhibit F | | |
| PCI | 5 | 1.1 | PCI.5.1.1 | PCI-DSS | 2 | See Exhibit F | | |
| PCI | 5 | 2 | PCI.5.2 | PCI-DSS | 2 | See Exhibit F | | |
| PCI | 6 | 0 | PCI.6.0 | PCI-DSS | | See Exhibit F | | |
| PCI | 6 | 1 | PCI.6.1 | PCI-DSS | 3 | See Exhibit F | | |
| PCI | 6 | 2 | PCI.6.2 | PCI-DSS | 3 | See Exhibit F | | |
| PCI | 6 | 3 | PCI.6.3 | PCI-DSS | 3 | See Exhibit F | | |
| PCI | 6 | 3.1 | PCI.6.3.1 | PCI-DSS | 3 | See Exhibit F | | |
| PCI | 6 | 3.2 | PCI.6.3.2 | PCI-DSS | 3 | See Exhibit F | | |
| PCI | 6 | 4 | PCI.6.4 | PCI-DSS | 3 | See Exhibit F | | |
| PCI | 6 | 4.1 | PCI.6.4.1 | PCI-DSS | 3 | See Exhibit F | | |
| PCI | 6 | 4.2 | PCI.6.4.2 | PCI-DSS | 3 | See Exhibit F | | |
| PCI | 6 | 4.3 | PCI.6.4.3 | PCI-DSS | 3 | See Exhibit F | | |
| PCI | 6 | 4.4 | PCI.6.4.4 | PCI-DSS | 3 | See Exhibit F | | |
| PCI | 6 | 4.5 | PCI.6.4.5 | PCI-DSS | 6 | See Exhibit F | | |
| PCI | 6 | 4.5.1 | PCI.6.4.5.1 | PCI-DSS | 6 | See Exhibit F | | |
| PCI | 6 | 4.5.2 | PCI.6.4.5.2 | PCI-DSS | 6 | See Exhibit F | | |
| PCI | 6 | 4.5.3 | PCI.6.4.5.3 | PCI-DSS | 6 | See Exhibit F | | |
| PCI | 6 | 4.5.4 | PCI.6.4.5.4 | PCI-DSS | 6 | See Exhibit F | | |
| PCI | 6 | 5 | PCI.6.5 | PCI-DSS | 3 | See Exhibit F | | |
| PCI | 6 | 5.1 | PCI.6.5.1 | PCI-DSS | 3 | See Exhibit F | | |
| PCI | 6 | 5.2 | PCI.6.5.2 | PCI-DSS | 3 | See Exhibit F | | |

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|---|---|---|---|---|---|---|---|---|
| PCI | 6 | 5.3 | PCI.6.5.3 | PCI-DSS | 3 | See Exhibit F | | |
| PCI | 6 | 5.4 | PCI.6.5.4 | PCI-DSS | 3 | See Exhibit F | | |
| PCI | 6 | 5.5 | PCI.6.5.5 | PCI-DSS | 3 | See Exhibit F | | |
| PCI | 6 | 5.6 | PCI.6.5.6 | PCI-DSS | 3 | See Exhibit F | | |
| PCI | 6 | 5.7 | PCI.6.5.7 | PCI-DSS | 3 | See Exhibit F | | |
| PCI | 6 | 5.8 | PCI.6.5.8 | PCI-DSS | 3 | See Exhibit F | | |
| PCI | 6 | 5.9 | PCI.6.5.9 | PCI-DSS | 3 | See Exhibit F | | |
| PCI | 6 | 6 | PCI.6.6 | PCI-DSS | 3 | See Exhibit F | | |
| PCI | 7 | 0 | PCI.7.0 | PCI-DSS | | See Exhibit F | | |
| PCI | 7 | 1 | PCI.7.1 | PCI-DSS | 4 | See Exhibit F | | |
| PCI | 7 | 1.1 | PCI.7.1.1 | PCI-DSS | 4 | See Exhibit F | | |
| PCI | 7 | 1.2 | PCI.7.1.2 | PCI-DSS | 4 | See Exhibit F | | |
| PCI | 7 | 1.3 | PCI.7.1.3 | PCI-DSS | 4 | See Exhibit F | | |
| PCI | 7 | 1.4 | PCI.7.1.4 | PCI-DSS | 4 | See Exhibit F | | |
| PCI | 7 | 2 | PCI.7.2 | PCI-DSS | 4 | See Exhibit F | | |
| PCI | 7 | 2.1 | PCI.7.2.1 | PCI-DSS | 4 | See Exhibit F | | |
| PCI | 7 | 2.2 | PCI.7.2.2 | PCI-DSS | 4 | See Exhibit F | | |
| PCI | 7 | 2.3 | PCI.7.2.3 | PCI-DSS | 4 | See Exhibit F | | |
| PCI | 8 | 0 | PCI.8.0 | PCI-DSS | | See Exhibit F | | |
| PCI | 8 | 1 | PCI.8.1 | PCI-DSS | 4 | See Exhibit F | | |
| PCI | 8 | 2 | PCI.8.2 | PCI-DSS | 4 | See Exhibit F | | |
| PCI | 8 | 3 | PCI.8.3 | PCI-DSS | 4 | See Exhibit F | | |
| PCI | 8 | 4 | PCI.8.4 | PCI-DSS | 4 | See Exhibit F | | |
| PCI | 8 | 5 | PCI.8.5 | PCI-DSS | 4 | See Exhibit F | | |
| PCI | 8 | 5.1 | PCI.8.5.1 | PCI-DSS | 4 | See Exhibit F | | |
| PCI | 8 | 5.2 | PCI.8.5.2 | PCI-DSS | 4 | See Exhibit F | | |
| PCI | 8 | 5.3 | PCI.8.5.3 | PCI-DSS | 4 | See Exhibit F | | |
| PCI | 8 | 5.4 | PCI.8.5.4 | PCI-DSS | 4 | See Exhibit F | | |
| PCI | 8 | 5.5 | PCI.8.5.5 | PCI-DSS | 4 | See Exhibit F | | |
| PCI | 8 | 5.6 | PCI.8.5.6 | PCI-DSS | 4 | See Exhibit F | | |
| PCI | 8 | 5.7 | PCI.8.5.7 | PCI-DSS | 4 | See Exhibit F | | |
| PCI | 8 | 5.8 | PCI.8.5.8 | PCI-DSS | 4 | See Exhibit F | | |
| PCI | 8 | 5.9 | PCI.8.5.9 | PCI-DSS | 4 | See Exhibit F | | |
| PCI | 8 | 5.10 | PCI.8.5.10 | PCI-DSS | 4 | See Exhibit F | | |
| PCI | 8 | 5.11 | PCI.8.5.11 | PCI-DSS | 4 | See Exhibit F | | |
| PCI | 8 | 5.12 | PCI.8.5.12 | PCI-DSS | 4 | See Exhibit F | | |
| PCI | 8 | 5.13 | PCI.8.5.13 | PCI-DSS | 4 | See Exhibit F | | |
| PCI | 8 | 5.14 | PCI.8.5.14 | PCI-DSS | 4 | See Exhibit F | | |
| PCI | 8 | 5.15 | PCI.8.5.15 | PCI-DSS | 4 | See Exhibit F | | |
| PCI | 8 | 5.16 | PCI.8.5.16 | PCI-DSS | 4 | See Exhibit F | | |
| PCI | 9 | 0 | PCI.9.0 | PCI-DSS | | See Exhibit F | | |
| PCI | 9 | 1 | PCI.9.1 | PCI-DSS | 2 | See Exhibit F | | |
| PCI | 9 | 1.1 | PCI.9.1.1 | PCI-DSS | 2 | See Exhibit F | | |
| PCI | 9 | 1.2 | PCI.9.1.2 | PCI-DSS | 2 | See Exhibit F | | |
| PCI | 9 | 1.3 | PCI.9.1.3 | PCI-DSS | 2 | See Exhibit F | | |
| PCI | 9 | 2 | PCI.9.2 | PCI-DSS | 5 | See Exhibit F | | |

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| PCI | 9 | 3 | PCI.9.3 | PCI-DSS | 5 | See Exhibit F | | |
| PCI | 9 | 3.1 | PCI.9.3.1 | PCI-DSS | 5 | See Exhibit F | | |
| PCI | 9 | 3.2 | PCI.9.3.2 | PCI-DSS | 5 | See Exhibit F | | |
| PCI | 9 | 3.3 | PCI.9.3.3 | PCI-DSS | 5 | See Exhibit F | | |
| PCI | 9 | 4 | PCI.9.4 | PCI-DSS | 5 | See Exhibit F | | |
| PCI | 9 | 5 | PCI.9.5 | PCI-DSS | 5 | See Exhibit F | | |
| PCI | 9 | 6 | PCI.9.6 | PCI-DSS | 5 | See Exhibit F | | |
| PCI | 9 | 7 | PCI.9.7 | PCI-DSS | 5 | See Exhibit F | | |
| PCI | 9 | 7.1 | PCI.9.7.1 | PCI-DSS | 5 | See Exhibit F | | |
| PCI | 9 | 7.2 | PCI.9.7.2 | PCI-DSS | 5 | See Exhibit F | | |
| PCI | 9 | 8 | PCI.9.8 | PCI-DSS | 5 | See Exhibit F | | |
| PCI | 9 | 9 | PCI.9.9 | PCI-DSS | 5 | See Exhibit F | | |
| PCI | 9 | 9.1 | PCI.9.9.1 | PCI-DSS | 5 | See Exhibit F | | |
| PCI | 9 | 10 | PCI.9.10 | PCI-DSS | 1 | See Exhibit F | | |
| PCI | 9 | 10.1 | PCI.9.10.1 | PCI-DSS | 1 | See Exhibit F | | |
| PCI | 9 | 10.2 | PCI.9.10.2 | PCI-DSS | 1 | See Exhibit F | | |
| PCI | 10 | 0 | PCI.10.0 | PCI-DSS | | See Exhibit F | | |
| PCI | 10 | 1 | PCI.10.1 | PCI-DSS | 4 | See Exhibit F | | |
| PCI | 10 | 2 | PCI.10.2 | PCI-DSS | 4 | See Exhibit F | | |
| PCI | 10 | 2.1 | PCI.10.2.1 | PCI-DSS | 4 | See Exhibit F | | |
| PCI | 10 | 2.2 | PCI.10.2.2 | PCI-DSS | 4 | See Exhibit F | | |
| PCI | 10 | 2.3 | PCI.10.2.3 | PCI-DSS | 4 | See Exhibit F | | |
| PCI | 10 | 2.4 | PCI.10.2.4 | PCI-DSS | 4 | See Exhibit F | | |
| PCI | 10 | 2.5 | PCI.10.2.5 | PCI-DSS | 4 | See Exhibit F | | |
| PCI | 10 | 2.6 | PCI.10.2.6 | PCI-DSS | 4 | See Exhibit F | | |
| PCI | 10 | 2.7 | PCI.10.2.7 | PCI-DSS | 4 | See Exhibit F | | |
| PCI | 10 | 3 | PCI.10.3 | PCI-DSS | 4 | See Exhibit F | | |
| PCI | 10 | 3.1 | PCI.10.3.1 | PCI-DSS | 4 | See Exhibit F | | |
| PCI | 10 | 3.2 | PCI.10.3.2 | PCI-DSS | 4 | See Exhibit F | | |
| PCI | 10 | 3.3 | PCI.10.3.3 | PCI-DSS | 4 | See Exhibit F | | |
| PCI | 10 | 3.4 | PCI.10.3.4 | PCI-DSS | 4 | See Exhibit F | | |
| PCI | 10 | 3.5 | PCI.10.3.5 | PCI-DSS | 4 | See Exhibit F | | |
| PCI | 10 | 3.6 | PCI.10.3.6 | PCI-DSS | 4 | See Exhibit F | | |
| PCI | 10 | 4 | PCI.10.4 | PCI-DSS | 4 | See Exhibit F | | |
| PCI | 10 | 4.1 | PCI.10.4.1 | PCI-DSS | 4 | See Exhibit F | | |
| PCI | 10 | 4.2 | PCI.10.4.2 | PCI-DSS | 4 | See Exhibit F | | |
| PCI | 10 | 4.3 | PCI.10.4.3 | PCI-DSS | 4 | See Exhibit F | | |
| PCI | 10 | 5 | PCI.10.5 | PCI-DSS | 4 | See Exhibit F | | |
| PCI | 10 | 5.1 | PCI.10.5.1 | PCI-DSS | 4 | See Exhibit F | | |
| PCI | 10 | 5.2 | PCI.10.5.2 | PCI-DSS | 4 | See Exhibit F | | |
| PCI | 10 | 5.3 | PCI.10.5.3 | PCI-DSS | 4 | See Exhibit F | | |
| PCI | 10 | 5.4 | PCI.10.5.4 | PCI-DSS | 4 | See Exhibit F | | |
| PCI | 10 | 5.5 | PCI.10.5.5 | PCI-DSS | 4 | See Exhibit F | | |
| PCI | 10 | 6 | PCI.10.6 | PCI-DSS | 4 | See Exhibit F | | |
| PCI | 10 | 7 | PCI.10.7 | PCI-DSS | 4 | See Exhibit F | | |
| PCI | 11 | 0 | PCI.11.0 | PCI-DSS | | See Exhibit F | | |

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|---|---|---|---|---|---|---|---|---|
| PCI | 11 | 1 | PCI.11.1 | PCI-DSS | 4 | See Exhibit F | | |
| PCI | 11 | 2 | PCI.11.2 | PCI-DSS | 2 | See Exhibit F | | |
| PCI | 11 | 2.1 | PCI.11.2.1 | PCI-DSS | 2 | See Exhibit F | | |
| PCI | 11 | 2.2 | PCI.11.2.2 | PCI-DSS | 2 | See Exhibit F | | |
| PCI | 11 | 2.3 | PCI.11.2.3 | PCI-DSS | 2 | See Exhibit F | | |
| PCI | 11 | 3 | PCI.11.3 | PCI-DSS | 2 | See Exhibit F | | |
| PCI | 11 | 3.1 | PCI.11.3.1 | PCI-DSS | 2 | See Exhibit F | | |
| PCI | 11 | 3.2 | PCI.11.3.2 | PCI-DSS | 2 | See Exhibit F | | |
| PCI | 11 | 4 | PCI.11.4 | PCI-DSS | 2 | See Exhibit F | | |
| PCI | 11 | 5 | PCI.11.5 | PCI-DSS | 4 | See Exhibit F | | |
| PCI | 12 | 0 | PCI.12.0 | PCI-DSS | | See Exhibit F | | |
| PCI | 12 | 1 | PCI.12.1 | PCI-DSS | 6 | See Exhibit F | | |
| PCI | 12 | 1.1 | PCI.12.1.1 | PCI-DSS | 6 | See Exhibit F | | |
| PCI | 12 | 1.2 | PCI.12.1.2 | PCI-DSS | 1 | See Exhibit F | | |
| PCI | 12 | 1.3 | PCI.12.1.3 | PCI-DSS | 6 | See Exhibit F | | |
| PCI | 12 | 2 | PCI.12.2 | PCI-DSS | 6 | See Exhibit F | | |
| PCI | 12 | 3 | PCI.12.3 | PCI-DSS | 6 | See Exhibit F | | |
| PCI | 12 | 3.1 | PCI.12.3.1 | PCI-DSS | 6 | See Exhibit F | | |
| PCI | 12 | 3.2 | PCI.12.3.2 | PCI-DSS | 6 | See Exhibit F | | |
| PCI | 12 | 3.3 | PCI.12.3.3 | PCI-DSS | 6 | See Exhibit F | | |
| PCI | 12 | 3.4 | PCI.12.3.4 | PCI-DSS | 6 | See Exhibit F | | |
| PCI | 12 | 3.5 | PCI.12.3.5 | PCI-DSS | 6 | See Exhibit F | | |
| PCI | 12 | 3.6 | PCI.12.3.6 | PCI-DSS | 6 | See Exhibit F | | |
| PCI | 12 | 3.7 | PCI.12.3.7 | PCI-DSS | 6 | See Exhibit F | | |
| PCI | 12 | 3.8 | PCI.12.3.8 | PCI-DSS | 6 | See Exhibit F | | |
| PCI | 12 | 3.9 | PCI.12.3.9 | PCI-DSS | 6 | See Exhibit F | | |
| PCI | 12 | 3.10 | PCI.12.3.10 | PCI-DSS | 6 | See Exhibit F | | |
| PCI | 12 | 4 | PCI.12.4 | PCI-DSS | 6 | See Exhibit F | | |
| PCI | 12 | 5 | PCI.12.5 | PCI-DSS | 6 | See Exhibit F | | |
| PCI | 12 | 5.1 | PCI.12.5.1 | PCI-DSS | 6 | See Exhibit F | | |
| PCI | 12 | 5.2 | PCI.12.5.2 | PCI-DSS | 6 | See Exhibit F | | |
| PCI | 12 | 5.3 | PCI.12.5.3 | PCI-DSS | 4 | See Exhibit F | | |
| PCI | 12 | 5.4 | PCI.12.5.4 | PCI-DSS | 6 | See Exhibit F | | |
| PCI | 12 | 5.5 | PCI.12.5.5 | PCI-DSS | 6 | See Exhibit F | | |
| PCI | 12 | 6 | PCI.12.6 | PCI-DSS | 6 | See Exhibit F | | |
| PCI | 12 | 6.1 | PCI.12.6.1 | PCI-DSS | 6 | See Exhibit F | | |
| PCI | 12 | 6.2 | PCI.12.6.2 | PCI-DSS | 6 | See Exhibit F | | |
| PCI | 12 | 7 | PCI.12.7 | PCI-DSS | 6 | See Exhibit F | | |
| PCI | 12 | 8 | PCI.12.8 | PCI-DSS | 2 | See Exhibit F | | |
| PCI | 12 | 8.1 | PCI.12.8.1 | PCI-DSS | 2 | See Exhibit F | | |
| PCI | 12 | 8.2 | PCI.12.8.2 | PCI-DSS | 2 | See Exhibit F | | |
| PCI | 12 | 8.3 | PCI.12.8.3 | PCI-DSS | 2 | See Exhibit F | | |
| PCI | 12 | 8.4 | PCI.12.8.4 | PCI-DSS | 2 | See Exhibit F | | |
| PCI | 12 | 9 | PCI.12.9 | PCI-DSS | 4 | See Exhibit F | | |
| PCI | 12 | 9.1 | PCI.12.9.1 | PCI-DSS | 4 | See Exhibit F | | |
| PCI | 12 | 9.2 | PCI.12.9.2 | PCI-DSS | 4 | See Exhibit F | | |

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|---|---|---|---|---|---|---|---|---|
| PCI | 12 | 9.3 | PCI.12.9.3 | PCI-DSS | 4 | See Exhibit F | | |
| PCI | 12 | 9.4 | PCI.12.9.4 | PCI-DSS | 4 | See Exhibit F | | |
| PCI | 12 | 9.5 | PCI.12.9.5 | PCI-DSS | 4 | See Exhibit F | | |
| PCI | 1 | 9.6 | PCI.1.9.6 | PCI-DSS | 4 | See Exhibit F | | |
| PCI | A | 1 | PCI.A.1 | PCI-DSS | 3 | See Exhibit F | | |
| PCI | A | 1.1 | PCI.A.1.1 | PCI-DSS | 3 | See Exhibit F | | |
| PCI | A | 1.2 | PCI.A.1.2 | PCI-DSS | 3 | See Exhibit F | | |
| PCI | A | 1.3 | PCI.A.1.3 | PCI-DSS | 3 | See Exhibit F | | |
| PCI | A | 1.4 | PCI.A.1.4 | PCI-DSS | 3 | See Exhibit F | | |

## SOV Consolidated Non-Functional Requirements Traceability Matrix (RTM)
## Service Oriented Architecture (SOA)

| Base | Level | Sub | Req ID New | Focus | Specifics | Requirement Description | Notes | Evidence |
|---|---|---|---|---|---|---|---|---|
| SLN1 | 1 | 1 | SLN1.1.1 | SOA General | | Solutions components shall be committed to an advanced approach to interoperability using web services and Service Oriented Architecture (SOA) aligned with State standards and vision for interoperability. | | |
| SLN1 | 1 | 2 | SLN1.1.2 | SOA General | | Solutions shall implement a Service Oriented Architecture by using an Enterprise Service Bus, responsible to monitor and control routing of message exchange between services, resolve contention between communicating service components, control deployment and versioning of services and marshal use of redundant services. | | |
| SLN1 | 1 | 3 | SLN1.1.3 | SOA General | | Solutions shall support creation and extension of service interfaces through the use of Web Services Description Language (WSDL) | | |
| SLN1 | 1 | 4 | SLN1.1.4 | SOA General | | Solutions shall provide the ability to distribute services amongst different components and tiers of the architecture. | | |
| SLN1 | 1 | 5 | SLN1.1.5 | SOA General | | Solutions shall develop/integrate services using standardized Web Services formats. | | |
| SLN1 | 1 | 6 | SLN1.1.6 | SOA General | | Solutions shall allow for centralized service maintenance (new, update, delete). | | |
| SLN1 | 1 | 7 | SLN1.1.7 | SOA General | | Solutions shall provide the ability to publish services and related data to be used by different types and classes of service consumers. | | |
| SLN1 | 1 | 8 | SLN1.1.8 | SOA General | | Solutions shall ensure enterprise-wide access to services through all required channels. | | |
| SLN1 | 1 | 9 | SLN1.1.9 | SOA General | | Solutions shall provide the capabilities for a Real-Time (or near real-time) Integrated Enterprise where common data elements about the consumers served and services rendered are easily shared across organizational units with appropriate adherence to security and privacy restrictions. | | |
| SLN1 | 1 | 10 | SLN1.1.10 | SOA General | | Solutions shall establish an interoperability layer that supports interactions among components via a variety of protocols (HTTP/plain old XML [POX], SOAP, Internet Inter-ORB Protocol [IIOP], .NET remoting, Message-Oriented Middleware [MOM] protocols, file transfer protocols and others) and interaction styles (request/reply, conversational, publish and subscribe, asynchronous messaging and others). | | |
| SLN1 | 1 | 11 | SLN1.1.11 | SOA General | | Solutions shall implement synchronous and asynchronous program-to-program communication, moving messages between SOA service consumer modules and service provider modules at runtime. The ESB component may also move files, database rows and other data. | | |
| SLN1 | 1 | 12 | SLN1.1.12 | Logical Data Representation | | Message and data formats should be based on logical representations of business objects rather than native application data structures | | |
| SLN1 | 1 | 13 | SLN1.1.13 | Normalized Data Formats | | Data transformations shall be to and from normalized formats.<br>Normalized data formats facilitate composition and reduce the number of transformations that must be created and maintained. A canonical data representation that spans the enterprise can be used but is not required. A federated approach to data normalization is also possible | | |
| SLN1 | 1 | 14 | SLN1.1.14 | Avoid Point-to-Point Integrations | | Point-to-point integrations are to be avoided. Application integration, both internal and external, shall go through the central ESB. Point-to-point integrations are brittle, inflexible, and expensive to maintain. There are cases where point-to-point integrations are required but these should be handled as exception cases. Example exceptions include performance requirements that can only be met using point-to-point connections and when large amounts of data must be moved | | |
| SLN1 | 1 | 15 | SLN1.1.15 | Technical Orchestration | | Technical orchestration shall be separated from business processes.<br>Making a clear distinction between technical aspects and business aspects facilitates maintenance of both. Technical aspects change when the underlying systems change whereas business aspects change when the business changes | | |
| SLN1 | 1 | 16 | SLN1.1.16 | Business-level Services | | SOA Services shall expose business-level functionality and data.<br>Business-level functionality and data are required to create business valuable composite applications. There may also be lower-level SOA Services that are reused by the business-level SOA Services. | | |
| SLN1 | 1 | 17 | SLN1.1.17 | Service Contract | | SOA Services include a contract that specifies the functional and non-functional capabilities provided.<br>In order to support business-level composition, the SOA Service must have a contract that is understandable to a business person | | |
| SLN1 | 1 | 18 | SLN1.1.18 | Access via Services | | Enterprise data and functions shall be accessed through SOA Services. SOA Services create the foundation for agile composite application development. Failing to leverage SOA Services defeats the primary goal of service-oriented integration | | |
| SLN1 | 1 | 19 | SLN1.1.19 | Opaque Service Implementation | | The implementation of a SOA Service is opaque to all service consumers. Service consumers must be able to successfully call a SOA Service without needing to understand the internal workings of the SOA Services. | | |
| SLN1 | 1 | 20 | SLN1.1.20 | Platform Independence | | The service consumer platform is independent from the service provider platform. SOA Services need to support any kind of service consumer regardless of the particular platform that the consumer is built upon | | |
| SLN1 | 1 | 21 | SLN1.1.21 | Location Transparency | | The location of a service provider is unimportant to the service consumer and vice-versa Location transparency helps provide the de-coupling of service consumers and providers necessary for extensive SOA Service reuse (assuming the service can detect and apply the relivant security protocols that may apply based on the origination location) | | |

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| SLN1 | 1 | 22 | SLN1.1.22 | Concurrent Service Versions | | Service design, implementation, and consumption shall support multiple versions of a SOA Service in production concurrently. | | |
| SLN1 | 1 | 23 | SLN1.1.23 | Graceful Service Migration | | Service consumers shall be able to migrate to a newer version of a SOA Service gracefully. Service consumers should migrate to a new version of a SOA Service as part of a normal maintenance process. The coordinated deployment of service consumers and service providers should not be necessary | | |
| SLN1 | 1 | 24 | SLN1.1.24 | Event Processing | | Applications included in the integration can raise events which must be processed consistently. Events allow the applications that are included in the integration to notify other applications that something important has occurred. The events that are raised by applications must not be ignored and the architecture should handle the events in a consistent manner. Each event should trigger the appropriate response. | | |
| SLN1 | 1 | 25 | SLN1.1.25 | Service Classification | | All services shall be classified with one of the following values: Presentation, Process, Business, Data, Access, or Utility | | |
| SLN1 | 1 | 26 | SLN1.1.26 | Service Portfolio Management | | All services shall be reviewed, classified, and cataloged prior to use. Duplicate services shall be rationaled and retired appropriately | | |
| SLN1 | 1 | 27 | SLN1.1.27 | Service Ownership | | All services shall have key stakeholder/owners identified | | |
| SLN1 | 1 | 28 | SLN1.1.28 | WSDL Development Standards | | All WSDLs developed for Vermont shall conform to the WSDL Development Standards | | |
| SLN1 | 1 | 29 | SLN1.1.29 | XSD Standardization | | All SOA-related messages shall be formally defined with XSD (preferable) or DTDs. | | |
| SLN1 | 1 | 30 | SLN1.1.30 | SOA Service Language | | SOA-related services hosted should be implemented in Java. | | |
| SLN1 | 1 | 31 | SLN1.1.31 | SOA policy | | Implemented services shall rely on WS-Policy configurations for message reliability (WS-ReliableMessaging) | | |
| SLN1 | 1 | 32 | SLN1.1.32 | SOA Metadata | | The following metadata attributes shall be tracked for all services in the services catalog: (name, lifecycle status, class, description, owner, version, revision history, release frequency, versioning policy, deprecation policy, message exchange patterns, compensating transaction support, availability requirements, volume, max message size, security attributes, sla, logging requirements) | | |
| SLN1 | 1 | 33 | SLN1.1.33 | SOA Lifecycle Status | | SOA services shall be attributed with one of the following SOA Lifecycle Status values: Candidate, Justified, Defined, Designed, Implemented, Operational, or Retired. | | |
| SLN1 | 1 | 34 | SLN1.1.34 | Central SOA Component Deployment | | The service bus, registry, and repository shall be deployed as one logical entity in production instead of federating for each agency. SOA component federation shall not be permitted. | | |
| SLN1 | 1 | 35 | SLN1.1.35 | SOA IdM Integration | | SOA technology components shall rely on the central IdM technology components for authentication/authorization | | |
| SLN1 | 1 | 36 | SLN1.1.36 | SOA Rules Integration | | Business rules implemented with the rules engine should be accessed through a SOA service | | |
| SLN1 | 1 | 37 | SLN1.1.37 | SOA General | | Be designed, built and deployed with enterprise architecture best practices including substantial reliance on highly configurable SOA components. | | |
| SLN1 | 1 | 38 | SLN1.1.38 | SOA General | | Solutions shall provide reliable, once-only delivery of messages (guarantee of reliable and non-repetitive delivery). | | |
| SLN1 | 1 | 39 | SLN1.1.39 | SOA General | | Solutions shall support the industry-standards messaging and interfaces relevant to health and human services organizations including, but not limited to: - Health Level Seven (HL7) Versions 2.x, 3.x, and CCD - Integrating the Healthcare Enterprise (IHE) XD* Profiles ( including Electornic Data Inerchange (EDI) X12 healthcare format) | | |
| SLN1 | 1 | 40 | SLN1.1.40 | SOA General | | Solutions shall provide the technology that hosts the execution of process logic spanning multiple back-end services or applications - typically for short-term (seconds or minutes) processes that can occasionally also be long term (hours, days, weeks) - with the aim of implementing composite services or automated solution-to-Solution processes. Features include: ' Graphical design surface for specifying process flows ' Support for standard specification languages including Business Process Modeling Notation (BPMN) ' Support for standard representations including Business Process Execution Language (BPEL), XML Process Definition Language (XPDL), Business Process Modeling Language (BPML) and Web Services Flow Language (WSFL) ' Ability to specify compensating transactions and execute those transactions upon failure of the process flow ' Integration with workflow | | |
| SLN1 | 1 | 41 | SLN1.1.41 | SOA General | | Solutions shall provide the technology to perform syntactic and semantic hub-based transformation of messages, including: ' Support of taxonomy ' Support of ontology ' Reusable transformation maps ' Built-in transformation functions ' Extending the transformation function with custom-coded logic ' Support B2B project translation including Electronic Data Interchange (EDI), RosettaNet, HL7, etc. | | |
| SLN1 | 1 | 42 | SLN1.1.42 | SOA General | | Solutions shall provide the functionality that provides reliability for applications, services or message flows: ' Load balancing ' High availability ' Fault tolerance ' Failover ' In-order delivery ' Transaction support ' Execution prioritization ' Message prioritization | | |
| SLN1 | 1 | 43 | SLN1.1.43 | SOA General | | Solutions shall provide the functionality used to monitor the operation of the overall Solution (services, applications, processes and application infrastructure), and to collect events and usage information aimed at populating technical KPIs of the deliverables supported by the SOA backplane and of the SOA backplane components by monitoring and collecting metrics for: ' Messaging traffic ' Process state and behavior ' Application and service parameters and behavior for all nodes in a LAN or WAN | | |
| SLN1 | 1 | 44 | SLN1.1.44 | SOA General | | Solutions shall provide the tools and technologies required to implement the necessary control access to the services and the connected resources (for example, other services and databases), as well as the SOA backplane functionality. Capabilities include: ' Authentication ' Authorization ' Encryption/decryption ' Digital signatures ' Credential mapping | | |

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| SLN1 | 1 | 45 | SLN1.1.45 | SOA General | | Solutions shall provide the functionality to assist State's operations personnel in keeping the resultant Solution (applications, services and infrastructure) running at peak efficiency at all times, including: ' Establishing rules for automated Solution monitoring ' Establishing network-alert-based management ' Supporting autonomous network behavior so local management and problem Resolution can continue during an outage ' A console that enables domain-specific display for multiple devices | | |
| SLN1 | 1 | 46 | SLN1.1.46 | SOA General | | Solutions shall provide the technology that manages the metadata and provides the features needed to support the reliable operation of services. Examples include: ' Online catalog of services and associated artifacts such as WSDL files, XSDs, BPEL files ' A single point of controlled access for cataloging, promoting, publishing and searching for information about managed assets ' Metadata that enables an Enterprise Service Bus (ESB) to find, bind to and invoke the execution of a service implementation ' Support for extending existing asset types and defining and populating custom asset types | | |
| SLN1 | 1 | 47 | SLN1.1.47 | SOA General | | Solutions shall provide support for building frameworks and extensible tools that enable the design, configuration, assembly, deployment, monitoring, and management of software designed around an SOA. | | |
| SLN1 | 1 | 48 | SLN1.1.48 | SOA General | | Solutions shall provide assistance for deploying applications with SOA and event-driven architecture in a manner that supports the following implementation strategies: ' Web Services: Web Services Interoperability (WS-I) Organization-compliant implementation of basic Web services standards, including SOAP, WSDL and Universal Description, Discovery and Integration (UDDI), as well as higher-level Web services standards, such as WS-Security. ' Representational State Transfer (REST): Support for XML-based messages, processing and HTTP, and XHTML. | | |
| SLN1 | 1 | 49 | SLN1.1.49 | SOA General | | Solutions shall have the ability to support varying message payloads, ranging from individual transactions to large files (more than 1GB) containing multiple transactions. (The SOA solution shall be configurated to approproate manage these varying types of message construrtion and size thorugh a common set of components. Where possible, solutions should error on the side of individual transactions per message to simplify the message management, routing, and database recovery needs.) | | |
| SLN1 | 1 | 50 | SLN1.1.50 | SOA General | | Solutions shall provide the technology to implement processing logic that directly manipulates data values, and the representation of those values for storage, transport or presentation purposes. This processing logic is used to establish common access to data sources (structured and unstructured), improve data quality or federate data from multiple sources. | | |
| SLN1 | 1 | 51 | SLN1.1.51 | SOA General | | Solutions shall provide the tooling that enables the recording (storage) or retrieving (reading) of information (data) from data stores. An example is distributed query functionality that parses incoming queries into sub queries and the execution of those sub queries, via the connectivity layer, against the respective sources where the desired data resides. | | |
| SLN1 | 1 | 52 | SLN1.1.52 | SOA General | | Solutions shall provide the data infrastructure tooling that enables users to represent semantic models, identify model-to-model relationships, and execute the necessary translations to reconcile data with differing semantic models. | | |
| SLN1 | 1 | 53 | SLN1.1.53 | SOA General | | Solutions shall provide optimization services that continuously read various types of metadata from across the architecture. The optimization verbs shall use the semantic/logical services to reconcile context to data content and deliver against some aspect of the application service-level agreement (requirements for data quality, data freshness, data volumes, throughput parameters, data-mining results, on-demand data aggregation or summarization, data enrichment, and many others). | | |
| SLN1 | 1 | 54 | SLN1.1.54 | SOA General | | Solutions shall provide tooling that supports data profiling: the process of examining the data available in an existing data source (for example, a database or a file), and collecting statistics and information about that data. The purpose of these statistics may be to: ' Find out whether existing data can easily be used for other purposes. ' Give metrics on data quality, including whether the data conforms to company standards. ' Assess the risk involved in integrating data for new applications. ' Track data quality. ' Assess whether metadata accurately describes the actual values in the source database. ' Establish an understanding of data challenges early in any data-intensive project, so that late project surprises are avoided. Finding data problems late in the project can incur time delays and project cost overruns. ' Have an enterprise view of all data for uses such as master data management (MDM), where key data is needed, or data governance, for improving data quality. | | |
| SLN1 | 1 | 55 | SLN1.1.55 | SOA General | | Solutions shall provide a modeling environment to support the roles of the business analyst, process architect, Solution architect and developer. It enables the modeling and architecture of all process artifacts. | | |
| SLN1 | 1 | 56 | SLN1.1.56 | SOA General | | Solutions shall support individual and group teamwork at design time and runtime. | | |
| SLN1 | 1 | 57 | SLN1.1.57 | SOA General | | Solutions shall have the ability to track a message from its origin to its destination (inside a firewall), inquire on the status of that message and address exceptions (for example, resend the message if a target times out). Usually implemented via a warehouse for archiving messages together with the associated tracking and logging data. | | |
| SLN1 | 1 | 58 | SLN1.1.58 | SOA General | | The Solution must incorporate Role/Group-based rights for the management of the Service Bus across the environments. | | |
| SLN1 | 1 | 59 | SLN1.1.59 | SOA General | | Solutions shall have: ' Protocols: The ability to use standards-based communication protocols, such as TCP/IP, HTTP, HTTP/S and SMTP. ' Protocol bridging: The ability to convert between the protocol native to the messaging platform and other protocols, such as Remote Method Invocation (RMI), IIOP and .NET remoting. | | |
| SLN1 | 1 | 60 | SLN1.1.60 | SOA General | | Solutions shall have features that enable in-flight message manipulation, such as transformation (typically XML-based), intelligent routing, naming and addressing. | | |

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| SLN1 | 1 | 61 | SLN1.1.61 | SOA General | | Solutions shall have the ability to apply logic to the routing of messages, including support for the following file interaction styles: Store and forward: Ability to persist a message and then send it to destinations. ' Publish/subscribe: Ability to distribute a message to multiple destinations based on a message attribute usually described as the subject area of the message. ' Request/reply: Ability to correlate asynchronous messages so that the target's response is associated with the appropriate request made by the source. ' Content-based: The ability to route a message based on a value or values within a message. For example, the ability to route a referral message whose target turnaround time is small to a different set of targets than a referral message whose turnaround time is high. | | |
| SLN1 | 1 | 62 | SLN1.1.62 | SOA General | | Solutions shall provide for syntactic conversion and semantic transformation, including ease of use and reuse, number of built-in functions, ease of extending the transformation function with custom-coded logic and XML support (e.g. schema or Extensible Stylesheet Language Transformations [XSLT]). | | |
| SLN1 | 1 | 63 | SLN1.1.63 | SOA General | | Solutions shall have the capability during operations, to assist service consumers by dynamically finding, binding to and invoking the execution of service providers. | | |
| SLN1 | 1 | 64 | SLN1.1.64 | SOA General | | Solutions shall provide the technology that combines design tools and runtime software to implement programs that act as glue, transforming among protocols, connecting to databases and linking pre-SOA Application Programming Interfaces (APIs) to the SOA backplane. To support B2B projects, adapters also need to support SOA services using B2B protocols such as Applicability Statement 1 (AS1)/Applicability Statement 2 (AS2), RosettaNet and Electronic Data Interchange for Administration, Commerce and Transportation (EDIFACT). | | |
| SLN1 | 1 | 65 | SLN1.1.65 | SOA General | | An Enterprise Metadata Repository shall provide design-time governance in support of the service lifecycle, delivering key capabilities for the storage and management of an extensible set of metadata for number of composites, services, business processes, and other IT-related assets | | |
| SLN1 | 1 | 66 | SLN1.1.66 | SOA General | | A Service Registry shall serve as an integration point for runtime tooling | | |
| SLN1 | 1 | 67 | SLN1.1.67 | SOA General | | Service Bus shall subscribe to new or modified assets | | |
| SLN1 | 1 | 68 | SLN1.1.68 | SOA General | | Composite applications shall discover updated endpoints and WSDL locations | | |
| SLN1 | 1 | 69 | SLN1.1.69 | SOA General | | Runtime monitoring tooling shall publish metrics to the Service Registry | | |
| SLN1 | 1 | 70 | SLN1.1.70 | SOA General | | Security policy manager for Web services that allows for centrally defined security policies that govern Web services operations (such as access policy, logging policy, and load balancing) | | |
| SLN1 | 1 | 71 | SLN1.1.71 | SOA General | | Shall provide dynamic discovery and service level monitoring of all artifacts deployed in the Application Server | | |
| SLN1 | 1 | 72 | SLN1.1.72 | SOA General | | Supplier shall define governance processes for the following domains:1. Service Portfolio Mgmt, 2. Services Technical Arch, 3. Service Design & Dev, 4. Configuration & Release Mgmt, 5. Contract Mgmt, 6. Service Monitoring & Control, 7. Incident Mgmt, 8. Change Mgmt | | |
| SLN1 | 1 | 73 | SLN1.1.73 | SOA General | | These SOA guildelines are to provide consistency, enable a framework for SOA govrenance, simpify development, and improve operations. However, at times exceptions to these guidelines maybe necessary to satisfy a specific functional or technical needs. When this occurs, approrpaite SOA governance policies and processes will drive the steps. | | |

# SOV Consolidated Non-Functional Requirements Traceability Matrix (RTM)

## Audit

| Base | Level | Sub | Req ID New | Focus | Specifics | Requirement Description | Notes | Evidence |
|---|---|---|---|---|---|---|---|---|
| SLN2 | 1 | 1 | SLN2.1.1 | Audit General | | Solutions shall maintain a record (e.g. audit trail) of all additions, changes and deletions made to data in the system. This should be readily searchable by user ID or client ID. This must include but is not limited to: - The user ID of the person who made the change - The date and time of the change - The physical, software/hardware and/or network location of the person while making the change - The information that was changed - The outcome of the event - The data before and after it was changed, and which screens were accessed and used | | |
| SLN2 | 1 | 2 | SLN2.1.2 | Audit General | | Solutions shall prevent modifications to the audit records in the normal course of operations. Any change or removal of an audit record would require signed leadership approval and would be documented. | | |
| SLN2 | 1 | 3 | SLN2.1.3 | Audit General | | The proposed Solution must provide logging, reporting and accessing errors and exceptions. | | |
| SLN2 | 1 | 4 | SLN2.1.4 | Audit General | | Solutions shall provide capability for integrating consent audit trails and data access audit trails in a consolidated report to support consent rule enforcement or investigation including audit trails based on deprecated rules or policies. | | |
| SLN2 | 1 | 5 | SLN2.1.5 | Audit General | | Solutions shall generate and protect consent audit events at the same or better levels as other data access audit records. | | |
| SLN2 | 1 | 6 | SLN2.1.6 | Audit General | | Solutions shall allow an authorized administrator to set the inclusion or exclusion of auditable events based on organizational policy & operating requirements/limits. | | |
| SLN2 | 1 | 7 | SLN2.1.7 | Audit General | | Solutions shall support logging to a common audit engine using the schema and transports specified in the Integrating the Healthcare Enterprise (IHE) Audit Trails and Node Authentication (ATNA) profile, Audit Log specification. | | |
| SLN2 | 1 | 8 | SLN2.1.8 | Audit General | | Solutions shall be able to detect security-relevant events that it mediates and generate audit records for them. At a minimum the events shall include those listed here: - start/stop - user login/logout - session timeout - account lockout - client record created/viewed/updated/deleted - scheduling - query - order - node-authentication failure - signature created/validated - Personally Identifiable Information (PII) export - PII import - security administration events - backup and restore | | |
| SLN2 | 1 | 9 | SLN2.1.9 | Audit General | | Solutions shall provide authorized administrators with the capability to read all audit information from the audit records in the following two ways: 1) Solutions shall provide the audit records in a manner suitable for the user to interpret the information. Solutions shall provide the capability to generate reports based on ranges of Solution date and time that audit records were collected. 2) Solutions shall be able to export logs into text format in such a manner as to allow correlation based on time (e.g. Coordinated Universal Time [UTC] synchronization). | | |
| SLN2 | 1 | 10 | SLN2.1.10 | Audit General | | Solutions shall be able to perform time synchronization using NTP/SNTP, and use this synchronized time in all security records of time. | | |
| SLN2 | 1 | 11 | SLN2.1.11 | Audit General | | Solutions shall have the ability to format for export recorded time stamps using UTC based on ISO 8601. | | |
| SLN2 | 1 | 12 | SLN2.1.12 | Audit General | | Solutions shall prohibit all users read access to the audit records, except those users that have been granted explicit read access. | | |
| SLN2 | 1 | 13 | SLN2.1.13 | Audit General | | Solutions shall protect the stored audit records from unauthorized modification or deletion. Solutions shall prevent modifications to the audit records. | | |
| SLN2 | 1 | 14 | SLN2.1.14 | Audit General | | Provide the ability to audit and log the network system/application and detailed user activity including data available to the user, data viewed by user, data downloaded by user, data uploaded by the solution, and all actions taken by user while in the system) in accordance with policy defined by the Exchange. | Auditing | |
| SLN2 | 1 | 15 | SLN2.1.15 | Audit General | | Provide and retain transaction logs in accordance with the National Institute of Standards and Technology (NIST) requirements. | Auditing | |
| SLN2 | 1 | 16 | SLN2.1.16 | Audit General | | Provide and retain transaction logs in accordance with the Health Insurance Portability and Accountability Act (HIPAA). | Auditing | |
| SLN2 | 1 | 17 | SLN2.1.17 | Audit General | | Provide and retain transaction logs in accordance with the Harmonized Security and Privacy Framework. | Auditing | |
| SLN2 | 1 | 18 | SLN2.1.18 | Audit General | | Provide reporting for security audits and compliance activities based on designated timeframes. | Auditing | |
| SLN2 | 1 | 19 | SLN2.1.19 | Audit General | | Provide ability to set security controls for audit logs via role based access controls. | Auditing | |
| SLN2 | 1 | 20 | SLN2.1.20 | Audit General | | Provide flexible audit report function (including on demand feature) and audit logging ability. | Auditing | |
| SLN2 | 1 | 21 | SLN2.1.21 | Audit General | | Provide ability to perform the database capabilities to facilitate audit. | Auditing | |
| SLN2 | 1 | 22 | SLN2.1.22 | Audit General | | The Contractor shall support an audit of data center operations by a 3rd party vendor, including, but not limited to: SSAE-16, Pentration Test, etc. | Auditing | |
| SLN2 | 1 | 23 | SLN2.1.23 | Audit General | | The Contractor shall provide the ability for the Exchange to examine system and error daily logs to minimize and predict system problems and initiate appropriate action. | Auditing | |
| SLN2 | 1 | 24 | SLN2.1.24 | Audit General | | Audit records will be date / Time stamped using Coordinated Universal Time [UTC]. Time will be tracked at the hundreth of a second (minimum). | Auditing | |

## SOV Consolidated Non-Functional Requirements Traceability Matrix (RTM)
## Business Intelligence & Extract, Transfer & Load

| Base | Level | Sub | Req ID New | Focus | Specifics | Requirement Description | Notes | Evidence |
|---|---|---|---|---|---|---|---|---|
| SLN3 | 1 | 1 | SLN3.1.1 | Business Intelligence General | | Shared Analytics Infrastructure Solutions shall provide scalable architecture and support design that will provide flexibility to add more data fields and change granularity level efficiently as analytic demand matures and expands. | | |
| SLN3 | 1 | 2 | SLN3.1.2 | Business Intelligence General | | Shared Analytics Infrastructure Solutions shall have the ability to capture delta change of data from diverse systems and populate them to Shared Analytics. | | |
| SLN3 | 1 | 3 | SLN3.1.3 | Business Intelligence General | | Shared Analytics Infrastructure Solutions shall capture and load data via Service Oriented Architecture (SOA)-based services and the ability to schedule data integration and load jobs. | | |
| SLN3 | 1 | 4 | SLN3.1.4 | Business Intelligence General | | Shared Analytics Infrastructure Solutions shall include the ability to facilitate design and construction of data integration processes. | | |
| SLN3 | 1 | 5 | SLN3.1.5 | Business Intelligence General | | Shared Analytics Infrastructure Solutions shall create custom transformations and the ability to group and reuse mapping and transformation operations. | | |
| SLN3 | 1 | 6 | SLN3.1.6 | Business Intelligence General | | Solutions shall support multi-dimensional views and multidimensional tables. | | |
| SLN3 | 1 | 7 | SLN3.1.7 | Business Intelligence General | | Shared Analytics Infrastructure Solutions shall support physical creation and storage of views as well as logical view. | | |
| SLN3 | 1 | 8 | SLN3.1.8 | Business Intelligence General | | Shared Analytics Infrastructure Solutions shall support design to facilitate a single view of business data. | | |
| SLN3 | 1 | 9 | SLN3.1.9 | Business Intelligence General | | Shared Analytics Infrastructure Solutions shall support Online Analytical Processing (OLAP) database structure for use in analytics and business intelligence. | | |
| SLN3 | 1 | 10 | SLN3.1.10 | Business Intelligence General | | Shared Analytics Infrastructure Solutions shall support hierarchical drill up/down; ad-hoc query; multi-dimensional view and multidimensional table. | | |
| SLN3 | 1 | 11 | SLN3.1.11 | Business Intelligence General | | Shared Analytics Infrastructure Solutions shall support data mining functions. | | |
| SLN3 | 1 | 12 | SLN3.1.12 | Business Intelligence General | | Shared Analytics Infrastructure Solutions shall perform in-database analytics. | | |
| SLN3 | 1 | 13 | SLN3.1.13 | Business Intelligence General | | Shared Analytics Infrastructure Solutions shall offer options to use Database Management Solution (DBMS)-integrated data integration tool and/or third party vendor integration tool. | | |
| SLN3 | 1 | 14 | SLN3.1.14 | Business Intelligence General | | Shared Analytics Infrastructure Solutions shall support fast large volume data loading and shall capture real-time data. | | |
| SLN3 | 1 | 15 | SLN3.1.15 | Business Intelligence General | | Solutions shall impose graduated access to reports based on user role and agency requirements/permissions to better analyze program data. | | |
| SLN3 | 1 | 16 | SLN3.1.16 | Business Intelligence General | | The Solution's business intelligence and reporting capabilities must be scalable to accommodate changes in Solution scale including changes in user population, transaction volume, throughput and geographical distribution while maintaining the agreed service levels. | | |
| SLN3 | 1 | 17 | SLN3.1.17 | Business Intelligence General | | Solutions shall have a mechanism to share specific data (e.g. limited data sets, detailed data at the level of the individual but with the data anonymous and completely de-identified, etc.) in a controllable fashion with other State and local agencies. | | |
| SLN3 | 1 | 18 | SLN3.1.18 | Business Intelligence General | | Solutions shall be extensible and have a scalable data architecture incorporating State and external data. | | |
| SLN3 | 1 | 19 | SLN3.1.19 | Business Intelligence General | | Solutions shall provide a tool to allow predictive modeling and analysis utilizing production data and coexist and integrate with such tools already in use (SPSS and SAS). | | |
| SLN3 | 1 | 20 | SLN3.1.20 | Business Intelligence General | | Solutions shall provide the ability for user to create and customize reports, queries, and dashboards. | | |
| SLN3 | 1 | 21 | SLN3.1.21 | Business Intelligence General | | Shared Analytics Infrastructure Solutions shall provide comprehensive metadata management from source to target. | | |
| SLN3 | 1 | 22 | SLN3.1.22 | Business Intelligence General | | Shared Analytics Infrastructure Solutions shall provide single repository for metadata, such as mappings of business concepts to underlying data structures, business glossary, data lineage, reference data, and objects (e.g. view, table, join) and reports from source to target. | | |
| SLN3 | 1 | 23 | SLN3.1.23 | Business Intelligence General | | Shared Analytics Infrastructure Solutions shall import metadata from tools and data sources. | | |
| SLN3 | 1 | 24 | SLN3.1.24 | Business Intelligence General | | Shared Analytics Infrastructure Solutions shall provide data quality tool or support 3rd party data quality tool for profiling, cleansing, and monitoring. | | |
| SLN3 | 1 | 25 | SLN3.1.25 | Business Intelligence General | | Shared Analytics Infrastructure Solutions shall produce metadata and/or data dictionaries in a format that the State can consume, e.g., Word, Excel, PDF, OF, etc. | | |
| SLN3 | 1 | 26 | SLN3.1.26 | Business Intelligence General | | Shared Analytics Infrastructure Solutions shall be highly available via various mechanisms. (e.g. data mart. Data replication, Tool provided for management of high availability, cluster option, back up configuration). | | |

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| SLN3 | 1 | 27 | SLN3.1.27 | Business Intelligence General | | Shared Analytics Infrastructure Solutions shall have an option for fast loading of data into the database. Where necessary this will include minimal relaxation of quality and integrity constraints and mechanisms for carrying out data quality checks as the final stage in the process. | | |
| SLN3 | 1 | 28 | SLN3.1.28 | Business Intelligence General | | Solutions shall provide for expansion of data storage as needed to accommodate increased volume of data based on approved Capacity Plans by the State. | | |
| SLN3 | 1 | 29 | SLN3.1.29 | Business Intelligence General | | Shared Analytics Infrastructure Solutions shall be American National Standards Institute (ANSI) Structured Query Language (SQL) Compliant. (Vendrs/data sheets need to specify version of SQL compliant ' e.g. 2003, 2006, 2008). | | |
| SLN3 | 1 | 30 | SLN3.1.30 | Business Intelligence General | | Shared Analytics Infrastructure Solutions shall be Xquery 1.0 standard compliant. | | |
| SLN3 | 1 | 31 | SLN3.1.31 | Business Intelligence General | | Shared Analytics Infrastructure Solutions shall support relevant industry standards for electronic data exchange. | | |
| SLN3 | 1 | 32 | SLN3.1.32 | Business Intelligence General | | Shared Analytics Infrastructure Solutions shall support reorganization of database/index/configuration online without the need for the Solution to shut down. | | |
| SLN3 | 1 | 33 | SLN3.1.33 | Business Intelligence General | | Shared Analytics Infrastructure Solutions shall release upgrades/patching and shall be applied with minimal loss of system availability during production hours. | | |
| SLN3 | 1 | 34 | SLN3.1.34 | Business Intelligence General | | Solutions shall allow bulk loading to support 24/7 environments with small or no window for loading data. | | |
| SLN3 | 1 | 35 | SLN3.1.35 | Business Intelligence General | | Shared Analytics Infrastructure Solutions shall provide standards-based connectivity including Open Database Connectivity (ODBC), Java Database Connectivity (JDBC), and Web Services (WS). | | |
| SLN3 | 1 | 36 | SLN3.1.36 | Business Intelligence General | | Shared Analytics Infrastructure Solutions shall provide scalable architecture. | | |
| SLN3 | 1 | 37 | SLN3.1.37 | Business Intelligence General | | Shared Analytics Infrastructure Solutions shall have no limit on the size of data types, including CHAR, NUM, CLOB, BLOB and XML. | | |
| SLN3 | 1 | 38 | SLN3.1.38 | Business Intelligence General | | Shared Analytics Infrastructure Solutions shall have no limits on the size of tables, indexes and other database-level objects, within the designed storage limits. | | |
| SLN3 | 1 | 39 | SLN3.1.39 | Business Intelligence General | | Shared Analytics Infrastructure Solutions shall support scaling across regions. | | |
| SLN3 | 1 | 40 | SLN3.1.40 | Business Intelligence General | | Shared Analytics Infrastructure Solutions shall provide flexibility in using public/private cloud version of the DBMS as an option to provide scalability in as cost effective way as needed. | | |
| SLN3 | 1 | 41 | SLN3.1.41 | Business Intelligence General | | Shared Analytics Infrastructure Solutions shall support native geo-spatial data types. | | |
| SLN3 | 1 | 42 | SLN3.1.42 | Business Intelligence General | | Shared Analytics Infrastructure Solutions shall provide Database Administration (DBA) tools for monitoring and administering DBMS and contain tools to manage the storage devices. | | |
| SLN3 | 1 | 43 | SLN3.1.43 | Business Intelligence General | | Shared Analytics Infrastructure Solutions shall have utilities built-in to the DBMS to automate the normal day-to-day DBA operations (e.g., automated index rebuilding, free space reclamation and block reorganization). | | |
| SLN3 | 1 | 44 | SLN3.1.44 | Business Intelligence General | | Shared Analytics Infrastructure Solutions shall provide the ability to: ' prioritize workload executions and ensure quality-of-service; ' partition indexing and aggregate management via parameters and tools; ' simulate the various workloads and mixes anticipated | | |
| SLN3 | 1 | 45 | SLN3.1.45 | Business Intelligence General | | Shared Analytics Infrastructure Solutions shall provide workflow and collaboration support for administrator tasks. | | |
| SLN3 | 1 | 46 | SLN3.1.46 | Business Intelligence General | | Shared Analytics Infrastructure Solutions shall run on multiple vendors' hardware and operating systems (i.e. IBM, HP, and Dell hardware, and AIX, Linux, and Windows Operating Systems) | | |
| SLN3 | 1 | 47 | SLN3.1.47 | Business Intelligence General | | Shared Analytics Infrastructure Solutions shall make an underlying DBMS available as a data warehouse appliance so it is also available as a standalone DBMS system. | | |
| SLN3 | 1 | 48 | SLN3.1.48 | Business Intelligence General | | Shared Analytics Infrastructure Solutions shall support major application development interfaces (e.g. .NET interface, Java 2 Platform, Enterprise Edition (J2EE)). | | |
| SLN3 | 1 | 49 | SLN3.1.49 | Business Intelligence General | | Shared Analytics Infrastructure Solutions shall support various database connectivity (e.g. ODBC, JDBC). | | |
| SLN3 | 1 | 50 | SLN3.1.50 | Business Intelligence General | | Shared Analytics Infrastructure Solutions shall have a track record with users extensively using Oracle Business Intellegence EE (OBI EE). | | |
| SLN3 | 1 | 51 | SLN3.1.51 | Business Intelligence General | | Shared Analytics Infrastructure Solutions shall support all connectivity required for the VT-selected business intelligence and extract/transform/load tools | | |
| SLN3 | 1 | 52 | SLN3.1.52 | Business Intelligence General | | Shared Analytics Infrastructure Solutions shall support triggers, stored procedures and extension. | | |
| SLN3 | 1 | 53 | SLN3.1.53 | Business Intelligence General | | The Solution must allow the user to export formatted reports from the system in industry standard formats, e.g., Word, Excel, PDF, OF, etc. | | |
| SLN3 | 1 | 54 | SLN3.1.54 | Business Intelligence General | | Shared Analytics Infrastructure Solutions shall import metadata from tools and data sources. | | |
| SLN3 | 1 | 55 | SLN3.1.55 | Business Intelligence General | | The Solution must limit report views based on user security / access rights. | | |
| SLN3 | 1 | 56 | SLN3.1.56 | Business Intelligence General | | The Solution must notify and distribute reports based on user specified criteria. | | |
| SLN3 | 1 | 57 | SLN3.1.57 | Business Intelligence General | | The Solution must organize reports into a shared list (library). | | |
| SLN3 | 1 | 58 | SLN3.1.58 | Business Intelligence General | | The Solution must present data in graphical or chart format. | | |
| SLN3 | 1 | 59 | SLN3.1.59 | Business Intelligence General | | The Solution must roll-up (summarize data) and drill-down (view details) in reports online. | | |

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| SLN3 | 1 | 60 | SLN3.1.60 | Business Intelligence General | | The Solution must schedule the generation of reports at specific times. | | |
| SLN3 | 1 | 61 | SLN3.1.61 | Business Intelligence General | | The Solution must sort data within reports in multiple ways. | | |
| SLN3 | 1 | 62 | SLN3.1.62 | Business Intelligence General | | The Solution must transmit reports to various designated recipients in a secure manner. | | |
| SLN3 | 1 | 63 | SLN3.1.63 | Business Intelligence General | | The Solution must restrict access to the shared list (library) or items within a shared list (library) to designated users. | | |
| SLN3 | 1 | 64 | SLN3.1.64 | Business Intelligence General | | The Solution shall generate ad-hoc and standard reports in real time as well as historical for incoming and outgoing contacts. | | |
| SLN3 | 1 | 65 | SLN3.1.65 | Business Intelligence General | | The Solution shall collect data and generate periodic reports as required by the Affordable Care Act. | | |
| SLN3 | 1 | 66 | SLN3.1.66 | Business Intelligence General | | The Solution shall develop and implement reports, dashboards, scorecards, predictive analytics, what-if analysis and statistical analysis. | | |
| SLN3 | 1 | 67 | SLN3.1.67 | Business Intelligence General | | The Solution shall generate reports necessary for the Health Insurance Exchange Entities, State and Federal officials, employers and other entities, such as insurance carriers. | | |
| SLN3 | 1 | 68 | SLN3.1.68 | Business Intelligence General | | The Solution shall Provide access to standardized reporting, ad hoc queries, and data visualization. | | |
| SLN3 | 1 | 69 | SLN3.1.69 | Business Intelligence General | | The Solution shall provide reports to users in online and offline formats, such as web, fax, and paper. | | |

## SOV Consolidated Non-Functional Requirements Traceability Matrix (RTM)

### Master Data Management and Integration

| Base | Level | Sub | Req ID New | Focus | Specifics | Requirement Description | Notes | Evidence |
|---|---|---|---|---|---|---|---|---|
| SLN4 | 1 | 1 | SLN4.1.1 | MDM General | State-assigned standard identifiers | Solutions shall utilize state-assigned/identified identifiers for entities | | |
| SLN4 | 1 | 2 | SLN4.1.2 | MDM General | Federal Interoperability | The Health Insurance Exchange IT systems must interact with HHS and/or other Federal agencies and data sources in order to verify and acquire data as needed through the Federal Data Service Hub. | | |
| SLN4 | 1 | 3 | SLN4.1.3 | MDM General | | The Solution shall apply mailing address validations including address, zip code, etc. (e.g. USPS, Pitney Bowes etc.) | | |
| SLN4 | 1 | 4 | SLN4.1.4 | MDM General | | The Solution shall provide the capability to link client records that are found to be duplicated or delink client records that are not duplicates | | |
| SLN4 | 1 | 5 | SLN4.1.5 | MDM General | | Enforce size requirements on messages as defined by the standards. | | |
| SLN4 | 1 | 6 | SLN4.1.6 | MDM IdM Integration | MDM IdM Integration | MDM technology components shall rely on the central IdM technology components for authentication/authorization | | |
| SLN4 | 1 | 7 | SLN4.1.7 | MDM General | | Ability to migrate contact/address info from Access system into new Exchange database. Such interaction should leverage the MDM infrastructure. | | |
| SLN4 | 1 | 8 | SLN4.1.8 | MDM General | | Ability to verify SS# through interface with Federal data source through VT HUB/CMS HUB | | |
| SLN4 | 1 | 9 | SLN4.1.9 | MDM General | | A data migration strategy for existing public plan enrollees shall be developed for open enrollment in 2013 if coverage is intended to be continuous. | | |
| SLN4 | 1 | 10 | SLN4.1.10 | MDM & Integration | | Healthcare-related solutions will use the National Information Exchange Model (NIEM) guidelines to develop, disseminate and support standards and processes that enable the consistent, efficient and transparent exchange of data elements between programs and States. | | |
| SLN4 | 1 | 11 | SLN4.1.11 | MDM & Integration | | Solutions will define a set of common data elements and leverage state and agency-wide information models | | |
| SLN4 | 1 | 12 | SLN4.1.12 | MDM & Integration | | Solutions will have the capability to follow a scheduled data purging process in accordance with an agreed upon purge criteria. | | |
| SLN4 | 1 | 13 | SLN4.1.13 | MDM & Integration | | Solutions will utilize Master Data Management functions to source data for key subject areas | | |
| SLN4 | 1 | 14 | SLN4.1.14 | MDM & Integration | | The solution shall provide real-time interfaces to transfer data between the Exchange's solution and existing state systems (such as the Eligibility Rules Engine, state Medicaid systems, Case Management systems, Identity Access Management systems, SERFF, HIOS, Federal Data Services Hub, etc.), external systems, databases and financial systems | | |
| SLN4 | | 15 | | | | Vendor will develop the necessary interfaces, using the ESB, with the Federal and State Agencies as necessary to comply with ACA requirements. | | |
| SLN4 | 1 | 16 | SLN4.1.16 | MDM & Integration | | The solution shall provide new and or update existing two-way, real-time interfaces to transfer data between the system and 3rd party vendors (i.e. Insurance Division, insurance carriers, federal databases, etc). | | |
| SLN4 | 1 | 17 | SLN4.1.17 | MDM & Integration | | The solution shall provide interfaces to existing State systems that leverage existing interface designs to incorporate extensible markup language (XML) to support the requirements of the solution and associated applications. | | |
| SLN4 | 1 | 18 | SLN4.1.18 | MDM & Integration | | The solution shall provide functionality that knows how, and when, to communicate with interfacing systems. | | |
| SLN4 | 1 | 19 | SLN4.1.19 | MDM & Integration | | Provide flexibility to interface using industry standard protocols (e.g. XML, 5010, etc.) | | |
| SLN4 | 1 | 20 | SLN4.1.20 | MDM & Integration | | Solutions shall have the ability to convert message formats and translate coded data within messages. | | |
| SLN4 | 1 | 21 | SLN4.1.21 | MDM & Integration | | — | | |
| SLN4 | 1 | 22 | SLN4.1.22 | MDM & Integration | | Solutions shall provide support for a metadata repository for data and message conversion and transformations. | | |
| SLN4 | 1 | 23 | SLN4.1.23 | MDM & Integration | | Healthcare-related solutions shall at a minimum support the following standards: - Integrating the Health Enterprise (IHE): Cross-Enterprise Document Sharing (XDS, XDS.b); Cross-Community Access (XCA) - Health Level Seven (HL7) Continuity of Care Document (CCD) C32 profile - AHS ONC Direct Project | | |
| SLN4 | 1 | 24 | SLN4.1.24 | MDM & Integration | | Solutions shall provide the technology to implement processing logic that can manipulate data values, and the representation of those values for transport or conversion purposes. This processing logic is used to establish a common meaning of data, improve data quality or federate data from multiple sources. | | |
| SLN4 | 1 | 25 | SLN4.1.25 | MDM & Integration | | Solutions shall provide tooling for data source connectivity: Adapters for a range of source types beyond Relational Database Management Solutions (RDBMS's) and legacy databases (access to data stored in non-relational structures - for example, VSAM files and IMS databases), including packaged applications and Web services, the ability to access semi-structured and unstructured data (such as e-mail, websites, office productivity tools, content repositories and rich media)and the ability to interpret (as a source) XML structures | | |
| SLN4 | 1 | 26 | SLN4.1.26 | MDM & Integration | | Solutions shall provide tooling to support the Extract-Transform-Load (ETL) process that involves: ' Extracting data from data sources. ' Transforming it to fit business needs (which can include quality levels). ' Loading it into the target data store. ' Caching: The ability to cache federation results and various subsets of the source data to improve performance in situations where source data volumes are large; therefore, retrieving all data required for integration directly from the source is not feasible. | | |

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| SLN4 | 1 | 27 | SLN4.1.27 | MDM & Integration | | Solutions shall have the ability to load data in a variety of approaches including (but not limited to) the following: - Bulk data extraction and loading - Granular trickle-feed acquisition and delivery - Changed-data capture (ability to identify and extract modified data) - Event-based acquisition (time-based or data-value-based) | | |
| SLN4 | 1 | 28 | SLN4.1.28 | MDM & Integration | | Solutions shall include the following types of transformation: - Simple transformations such as data-type conversions, string manipulations and Simple calculations - Moderate-complexity transformations, such as lookup and replace operations, aggregations, summarizations, deterministic matching and management of slowly changing dimensions - Higher-order transformations, such as sophisticated parsing operations on free-form text and rich media Facilities for developing custom transformations and extending packaged transformations - Facilities for developing custom transformations and extending packaged transformations | | |
| SLN4 | 1 | 29 | SLN4.1.29 | MDM & Integration | | Solutions shall provide tooling that enables the recording (storage) or retrieving (reading) of information (data) from data stores. An example is distributed query functionality that parses incoming queries into subqueries and the execution of those subqueries, via the connectivity layer, against the respective sources where the desired data resides. | | |
| SLN4 | 1 | 30 | SLN4.1.30 | MDM & Integration | | Solutions shall have the capability to support the global identification, linking and/or synchronization of client and provider information across heterogeneous data sources through semantic reconciliation of master client and master provider data. | | |
| SLN4 | 1 | 31 | SLN4.1.31 | MDM & Integration | | The solution's data model must be expressed using commonly accepted logical data model conventions with associated metadata. | | |
| SLN4 | 1 | 32 | SLN4.1.32 | MDM & Integration | | Solutions shall have strong facilities, in batch and real-time mode, for profiling, cleansing, matching, linking, identifying and semantically reconciling master client and master provider data in different data sources to create and maintain golden records. | | |
| SLN4 | 1 | 33 | SLN4.1.33 | MDM & Integration | | The solution's business rules and associated metadata related to data cleansing shall be sufficiently visible to satisfy any audit requirements. | | |
| SLN4 | 1 | 34 | SLN4.1.34 | MDM & Integration | | Solutions shall include the ability to review data quality metrics and track corrective actions. | | |
| SLN4 | 1 | 35 | SLN4.1.35 | MDM & Integration | | Solutions shall provide dynamically configurable rules for comparing and reconciling semantics across data sources, matching (both probabilistic and tunable) across changing demographic data structures, linking data, and managing the merging and unmerging of client and provider records with full auditability and survivability. | | |
| SLN4 | 1 | 36 | SLN4.1.36 | MDM & Integration | | Solutions shall load data in a fast, efficient and accurate manner including data from external sources where it is matched by a proxy and not the actual client or provider ID. | | |
| SLN4 | 1 | 37 | SLN4.1.37 | MDM & Integration | | Solutions shall include integration middleware, including publish and subscribe mechanisms, to provide a communication backbone for the bidirectional flow of client and provider data between the central repository and the spoke solutions, be they copies or subsets of the repository, or remote applications. | | |
| SLN4 | 1 | 38 | SLN4.1.38 | MDM & Integration | | Solutions shall be able to leverage a range of middleware products to data sources, including all Vermont and trading partner data sources, and expose Healthcare industry-standard interfaces. | | |
| SLN4 | 1 | 39 | SLN4.1.39 | MDM & Integration | | Solutions shall support integration with different latency characteristics and styles (e.g. real-time, batch). | | |
| SLN4 | 1 | 40 | SLN4.1.40 | MDM & Integration | | Solutions shall support integration with downstream Business Intelligence (BI) and analytical requirements. | | |
| SLN4 | 1 | 41 | SLN4.1.41 | MDM & Integration | | Solutions shall create and manage a central, database-based Solution or index of record for master client (i.e. Master Client Index [MCI]) and master provider (i.e. Master Provider Index [MPI]) data. | | |
| SLN4 | 1 | 42 | SLN4.1.42 | MDM & Integration | | To support how business users collaborate in the authoring and management of client and provider data, Solutions shall provide a flexible and comprehensive workflow-based capability that can be used to create and maintain workflows supporting client and provider data maintenance across the multiple source Solutions. | | |
| SLN4 | 1 | 43 | SLN4.1.43 | MDM & Integration | | Solutions shall include facilities for management and controlled access to client and provider data in the MDM such as reporting on MDM activities. | | |
| SLN4 | 1 | 44 | SLN4.1.44 | MDM & Integration | | Solutions shall have the ability to integrate the data within the MDM with management and security tools. | | |
| SLN4 | 1 | 45 | SLN4.1.45 | MDM & Integration | | Solutions shall manage the policies and rules associated with solutions's privacy access rights. | | |
| SLN4 | 1 | 46 | SLN4.1.46 | MDM & Integration | | Solutions shall configure and manage different rules of visibility, providing different views for different roles. | | |
| SLN4 | 1 | 47 | SLN4.1.47 | MDM & Integration | | Solutions shall provide analytics and performance measures related to a range of processes and activities taking place within MDM, from the running of batch data loads to the execution of workflows against benchmarks to the data quality of active client data in the MDM. | | |
| SLN4 | 1 | 48 | SLN4.1.48 | MDM & Integration | | Solutions shall include status and management tools for the chief data steward to monitor to-do lists of users to ensure effective action takes place across the management of the master client and master provider data. | | |
| SLN4 | 1 | 49 | SLN4.1.49 | MDM & Integration | | Solutions shall include solution-wide meta models to help identify what users, roles, applications and solutions are responsible for which client and provider data. | | |
| SLN4 | 1 | 50 | SLN4.1.50 | MDM & Integration | | Solutions shall provide workflow services for remediation of quality issues in client and provider data. | | |
| SLN4 | 1 | 51 | SLN4.1.51 | MDM & Integration | | Solutions shall include business rules services to interrogate which rules are used by MDM by frequency and preference and to provide suggested enhancements to such business rules. | | |
| SLN4 | 1 | 52 | SLN4.1.52 | MDM & Integration | | Solutions shall enable the delivery of a single client and a single provider view for all stakeholders. | | |

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| SLN4 | 1 | 53 | SLN4.1.53 | MDM & Integration | | Solutions shall be based on up-to-date, mainstream technologies, and capable of flexible and effective integration with a wide range of other application and infrastructure platform components (whether from the same vendor or not) that will be deployed by Vermont. | | |
| SLN4 | 1 | 54 | SLN4.1.54 | MDM & Integration | | Solutions shall protect and complement the data layer with a layer of business services for accessing and manipulating the client and provider data that is built for an SOA environment, and exposing web services interfaces. | | |
| SLN4 | 1 | 55 | SLN4.1.55 | MDM & Integration | | Solutions shall be capable of flexible configuration into a range of architectural styles in terms of instantiation, latency and use of client and provider data to enable different deployment scenarios, such as the consolidation, registry, coexistence and centralized scenarios. | | |
| SLN4 | 1 | 56 | SLN4.1.56 | MDM & Integration | | Solutions shall support ongoing client and provider data stewardship and governance requirements through monitoring of policy decisions and corrective action. | | |
| SLN4 | 1 | 57 | SLN4.1.57 | MDM & Integration | | Solutions shall track and maintain detailed records on all changes via interfaces and authoring to support audit requirements. | | |
| SLN4 | 1 | 58 | SLN4.1.58 | MDM & Integration | | The Solution must include a flexible data model that can model the complex relationships between the internal application sources inside Vermont, its trading partners, clients and providers, as well as intermediaries and other parties, with the ability to handle complex hierarchies. | | |
| SLN4 | 1 | 59 | SLN4.1.59 | MDM & Integration | | The solution's data model must be capable of handling at least the following categories of elements for clients and providers: - Identification - Demographics - Contact information - Relationships with other entities / providers - Interactions with other entities / providers | | |
| SLN4 | 1 | 60 | SLN4.1.60 | MDM & Integration | | Solutions shall include a data modeling capability that will be configurable, customizable, extensible, and upgradable. | | |
| SLN4 | 1 | 61 | SLN4.1.61 | MDM & Integration | | The solution's data model must be able to support Vermont standards for data content and coding where they exist. | | |
| SLN4 | 1 | 62 | SLN4.1.62 | MDM & Integration | | Solutions shall provide a Service Oriented Architecture based infrastructure (i.e. hub and spoke) for connecting to other solutions using an Enterprise Service Bus infrastructure. | | |
| SLN4 | 1 | 63 | SLN4.1.63 | MDM & Integration | | Solutions shall provide the capability to perform source to destination file integrity checks for exchange data and alert appropriate parties with issues | | |
| SLN4 | 1 | 64 | SLN4.1.64 | MDM & Integration | | Solutions shall build in contingencies for the storage of transactions where there is dependency on availability of data from business partners that provide authoritative data (e.g., the IRS, DHS, and SSA). The Exchange requirements will include identification of data availability requirements | | |
| SLN4 | 1 | 65 | SLN4.1.65 | MDM & Integration | | Solutions's Interface architecture for internal A2A (Application to Application) integration shall not have a negative impact on the user experience and expectation for application performance. | | |
| SLN4 | 1 | 66 | SLN4.1.66 | MDM & Integration | | Solutions's interfaces shall secure and protect the data and the associated infrastructure from a confidentiality, integrity and availability perspective. | | |
| SLN4 | 1 | 67 | SLN4.1.67 | MDM & Integration | | Solutions shall be able to support Application to Application (A2A) asynchronous messaging using web services. The messaging capabilities will be able to support a wide variety of A2A patterns including, but not limited to, the following: - Data look-up and retrieval - Data look-up with services provided by other applications - Simple bulk data transfer to/from other solutions. | | |
| SLN4 | 1 | 68 | SLN4.1.68 | MDM & Integration | | Solutions's interfaces shall continue to operate despite failure or unavailability of individual technology components such as a server platform or network connection. | | |
| SLN4 | 1 | 69 | SLN4.1.69 | MDM & Integration | | Solutions's interfaces must be scalable to accommodate changes in scale including changes in user population, transaction volume, throughput and geographical distribution. | | |
| SLN4 | 1 | 70 | SLN4.1.70 | MDM & Integration | | Solutions shall provide the capability to detect and remediate errors caused by batch processing and real time processing via user defined rules | | |
| SLN4 | 1 | 71 | SLN4.1.71 | MDM & Integration | | Solutions shall provide the capability to perform source to destination file integrity checks for exchange data and alert appropriate parties with issues | | |
| SLN4 | 1 | 72 | SLN4.1.72 | MDM & Integration | | | | |
| SLN4 | 1 | 73 | SLN4.1.73 | MDM & Integration | | | | |
| SLN4 | 1 | 74 | SLN4.1.74 | MDM & Integration | | | | |
| SLN4 | 1 | 75 | SLN4.1.75 | MDM Load Time | MDM Load Time | The MDM solution shall perform a full data load of Vermonters from sources within 24 hours | | |
| SLN4 | 1 | 76 | SLN4.1.76 | MDM EIM Usage | MDM EIM Usage | The MDM solution shall rely on application-agnostic, enterprise information models for mastered subject areas | | |
| SLN4 | 1 | 77 | SLN4.1.77 | Mastered Subject Areas | Mastered Subject Areas | The following subject areas shall be mastered within the MDM architecture: Vermonter (Person), Provider | | |
| SLN4 | 1 | 78 | SLN4.1.78 | MDM through SOA | MDM through SOA | Application software shall only access mastered subject areas through authoritative SOA/ESB-based services or through an authorized batch extract. Adhoc, one-off extracts shall not be permitted. | | |
| SLN4 | 1 | 79 | SLN4.1.79 | EIM Metadata Catalog | EIM Metadata Catalog | A metadata catalog shall be maintained for the enterprise information model | | |
| SLN4 | 1 | 80 | SLN4.1.80 | MDM Data Deduplication | MDM Data Deduplication | Data de-duplication and cleansing shall be employed on all mastered subject areas. This includes, but is not limited to, standardization of Postal Addresseses. | | |
| SLN4 | 1 | 81 | SLN4.1.81 | Application Data Cleansing and Deduplication | Application Data Cleansing and Deduplication | Data de-duplicaiton and cleansing shall be employed in all application software to minimize the entry of "dirty" data into the MDM environment or other solutions | | |
| SLN4 | 1 | 82 | SLN4.1.82 | MDM Availability | MDM Availability | The MDM solution shall support 99.9% availability in order to support other application needs | | |
| SLN4 | 1 | 83 | SLN4.1.83 | Data Classification | Data Classification | Data shall be classified into the following tiers: transactional, master, and analytic | | |
| SLN4 | 1 | 84 | SLN4.1.84 | Data Tier Flows | Data Tier Flows | Data updates shall follow a flow from transaction to mastered to analytic purposes; updates shall not propagate from the MDM data to the transactional applications | | |
| SLN4 | 1 | 85 | SLN4.1.85 | Data Stewardship | Data Stewardship | Data stewards shall be appointed for all major subject areas of the enterprise information model which includes mastered subject areas | | |

## SOV Consolidated Non-Functional Requirements Traceability Matrix (RTM)
## Interfaces

| Base | Level | Sub | Req ID New | Focus | Specifics | Requirement Description | Source | Uni-Directional Bi-Directional | Target | Notes | Evidence |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SLN5 | 1 | 1 | SLN5 1.1 | Interface General | | | | | | | |
| SLN5 | 1 | 2 | SLN5 1.2 | Interface General | | All internal and external application interfaces shall be brokered by the Vermont Integration Hub (VIH)'s ESB and follow ESB standards | | | | | |
| SLN5 | 1 | 3 | SLN51.3 | Interface General | | The HBE solution shall implement necessary interfaces to and from the Federal Data Services Hub (CMS - FDSH) | | | | | |
| SLN5 | 1 | 4 | SLN51.4 | Interface General | | The HBE solution shall implement necessary interfaces to and from SERFF | | | | | |
| SLN5 | 1 | 5 | SLN5 1.5 | Interface General | | The HBE solution shall implement necessary interfaces to and from an external premium processor | | | | | |
| SLN5 | 1 | 6 | SLN5 1.6 | Interface General | | The HBE solution shall implement necessary interfaces to and from the existing PeopleSoft/VISION application in Vermont | | | | | |
| SLN5 | 1 | 7 | SLN5 1.7 | Interface General | | The HBE solution shall implement necessary interfaces to and from an external interface to support financial management | | | | | |
| SLN5 | 1 | 8 | SLN5 1.8 | Interface General | | The HBE solution shall implement necessary interfaces to and from the new Call/Customer Support Center Vendor | | | | | |
| SLN5 | 1 | 9 | SLN5 1.9 | Interface General | | The HBE solution shall implement necessary interfaces to and from the SOV centralized document scanning facility | | | | | |
| SLN5 | 1 | 10 | SLN51.10 | Interface General | | The HBE solution shall implement necessary interfaces to and from the SOV ACCESS system | | | | | |
| SLN5 | 1 | 11 | SLN51.11 | Physical Interface | | Federal Data Services Hub Interface (CMS) | CMS | Bi-Directional | HBE | | |
| SLN5 | 1 | 12 | SLN51.12 | Interface Data Flow | | Report: APTC/CSR Payment | CMS | Uni-Directional | HBE | | |
| SLN5 | 1 | 13 | SLN51.13 | Interface Data Flow | | Report: Premium Payment History (Monthly) | HBE | Uni-Directional | CMS | | |
| SLN5 | 1 | 14 | SLN51.14 | Interface Data Flow | | Enrollment Data - Plan, Premium, APTC/CSR, State Premium Subsidy, State CSR, Household Contribution Amount, HIPP (Monthly) | HBE | Uni-Directional | CMS | | |
| SLN5 | 1 | 15 | SLN51.15 | Interface Data Flow | | Publish Carrier and Plan Information (Needed if SERFF interface is not in place) | HBE | Bi-Directional | CMS | | |
| SLN5 | 1 | 16 | SLN51.16 | Interface Data Flow | | Provide Plan Non-Renewal, Decertification, and Change in Availability Notices (Needed if SERFF interface is not in place) | HBE | Bi-Directional | CMS | | |
| SLN5 | 1 | 17 | SLN51.17 | Interface Data Flow | | Provide Rate and Benefit Data (Needed if SERFF interface is not in place) | HBE | Bi-Directional | CMS | | |
| SLN5 | 1 | 18 | SLN51.18 | Interface Data Flow | | HBE Notifies CMS of Individual Disenrollment from QHP | HBE | Bi-Directional | CMS | | |
| SLN5 | 1 | 19 | SLN51.19 | Interface Data Flow | | Validate Individual SSN | HBE | Bi-Directional | CMS | | |
| SLN5 | 1 | 20 | SLN51.20 | Interface Data Flow | | CMS or IRS Calculates and Returns Individual MAX APTC Request | HBE | Bi-Directional | CMS | | |
| SLN5 | 1 | 21 | SLN51.21 | Interface Data Flow | | Verify Lawful Presence Request, CMS Coordinates with Dept Homeland Security and SSA | HBE | Bi-Directional | CMS | | |
| SLN5 | 1 | 22 | SLN51.22 | Interface Data Flow | | Verify Household Income Request, CMS Coordinates with IRS | HBE | Bi-Directional | CMS | | |
| SLN5 | 1 | 23 | SLN51.23 | Interface Data Flow | | Initiate Citizenship Verification | HBE | Bi-Directional | CMS | | |
| SLN5 | 1 | 24 | SLN51.24 | Interface Data Flow | | Validate Immigration Verification | HBE | Bi-Directional | CMS | | |
| SLN5 | 1 | 25 | SLN51.25 | Interface Data Flow | | Send Documentation for Review to Verify Lawful Presence | HBE | Uni-Directional | CMS | | |
| SLN5 | 1 | 26 | SLN51.26 | Interface Data Flow | | Verify Individual Unemployment Insurance Request | HBE | Bi-Directional | CMS | | |
| SLN5 | 1 | 27 | SLN51.27 | Interface Data Flow | | HBE Reports Individual Exemption Status to IRS through CMS | HBE | Bi-Directional | CMS | | |
| SLN5 | 1 | 28 | SLN51.28 | Interface Data Flow | | Verify Employer EIN Request | HBE | Bi-Directional | CMS | | |
| SLN5 | 1 | 29 | SLN51.29 | Interface Data Flow | | HBE Notifies of Employer Participation in SHOP Exchange, CMS notifies IRS | HBE | Bi-Directional | CMS | | |
| SLN5 | 1 | 30 | SLN51.30 | Interface Data Flow | | HBE Notifies of Employer Termination from Participation in SHOP Exchange, CMS notifies IRS | HBE | Bi-Directional | CMS | | |
| SLN5 | 1 | 31 | SLN51.31 | Interface Data Flow | | HBE Notifies CMS of Exchange Appeal Decision, CMS notifies IRS | HBE | Bi-Directional | CMS | | |
| SLN5 | 1 | 32 | SLN51.32 | Interface Data Flow | | | HBE | Bi-Directional | CMS | | |
| SLN5 | 1 | 33 | SLN51.33 | Interface Data Flow | | Exchange Financial Statements | HBE | Uni-Directional | CMS | | |
| SLN5 | 1 | 34 | SLN51.34 | Physical Interface | | Premium Processor Vendor Interface | HBE | Bi-Directional | Premium Processor | | |
| SLN5 | 1 | 35 | SLN51.35 | Interface Data Flow | | Report: Premium Payment History (Monthly) | Premium Processor | Uni-Directional | HBE | | |
| SLN5 | 1 | 36 | SLN51.36 | Interface Data Flow | | Enrollment Data - Plan, Premium, APTC/CSR, State Premium Subsidy, State CSR, Household Contribution Amount, HIPP, Individual Public Premium Amount (To be used for Billing) | HBE | Uni-Directional | Premium Processor | | |
| SLN5 | 1 | 37 | SLN51.37 | Interface Data Flow | | Underpayment Notification | Premium Processor | Uni-Directional | HBE | | |
| SLN5 | 1 | 38 | SLN51.38 | Interface Data Flow | | Late Payment Notification | Premium Processor | Uni-Directional | HBE | | |
| SLN5 | 1 | 39 | SLN51.39 | Interface Data Flow | | Individual Public Premium Assistance Billing, Collection Transaction Summaries | Premium Processor | Uni-Directional | VISION | | |
| SLN5 | 1 | 40 | SLN51.40 | Interface Data Flow | | APTC/CSR Payment Summaries (based on CMS Report) | Premium Processor | Uni-Directional | VISION | | |
| SLN5 | 1 | 41 | SLN51.41 | Interface Data Flow | | State Premium Subsidy Payment Transaction Summaries | Premium Processor | Uni-Directional | VISION | | |
| SLN5 | 1 | 42 | SLN51.42 | Interface Data Flow | | User Fee Transaction Summaries | Premium Processor | Uni-Directional | VISION | | |
| SLN5 | 1 | 43 | SLN51.43 | Interface Data Flow | | Issuer Payment Remittance Transaction Summaries | Premium Processor | Uni-Directional | VISION | | |
| SLN5 | 1 | 44 | SLN51.44 | Interface Data Flow | | Individual Premium (QHP) Billing, Collection Transaction Summaries | Premium Processor | Uni-Directional | VISION | | |
| SLN5 | 1 | 45 | SLN51.45 | Interface Data Flow | | Employer Premium (QHP) Billing, Collection Transaction Summaries | Premium Processor | Uni-Directional | VISION | | |
| SLN5 | 1 | 46 | SLN51.46 | Interface Data Flow | | State CSR Payment Transaction Summaries | Premium Processor | Uni-Directional | VISION | | |
| SLN5 | 1 | 47 | SLN51.47 | Interface Data Flow | | HIPP Payment Transaction Summaries | Premium Processor | Uni-Directional | VISION | | |
| SLN5 | 1 | 48 | SLN51.48 | Interface Data Flow | | Refund Remitted Overpayment | Issuers | Uni-Directional | Premium Processor | | |
| SLN5 | 1 | 49 | SLN51.49 | Interface Data Flow | | Aggregate Premium Payments | HBE | Uni-Directional | Premium Processor | | |
| SLN5 | 1 | 50 | SLN51.50 | Interface Data Flow | | State CSR Funds | DFR | Uni-Directional | Premium Processor | | |
| SLN5 | 1 | 51 | SLN51.51 | Interface Data Flow | | State Premium Subsidy Funds | DFR | Uni-Directional | Premium Processor | | |
| SLN5 | 1 | 52 | SLN51.52 | Interface Data Flow | | Agent Commissions | Premium Processor | Uni-Directional | Agent | | |

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|---|---|---|---|---|---|---|---|---|---|---|
| SLN5 | 1 | 53 | SLN51.53 | Interface Data Flow | Enrollee Invoice Information (Medicaid Plans) | HBE | Uni-Directional | Premium Processor | | |
| SLN5 | 1 | 54 | SLN51.54 | Physical Interface | SERFF Interface | SERFF | Uni-Directional | HBE | | |
| SLN5 | 1 | 55 | SLN51.55 | Interface Data Flow | Provide Required Carrier and Plan Information | SERFF | Uni-Directional | HBE | | |
| SLN5 | 1 | 56 | SLN51.56 | Interface Data Flow | Provide Rate and Benefit Data | SERFF | Uni-Directional | HBE | | |
| SLN5 | 1 | 57 | SLN51.57 | Interface Data Flow | Provide Plan Non-Renewal and Change in Availability Notices | SERFF | Uni-Directional | HBE | | |
| SLN5 | 1 | 58 | SLN51.58 | Interface Data Flow | Provide Response to Solicitation | SERFF | Uni-Directional | HBE | | |
| SLN5 | 1 | 59 | SLN51.59 | Interface Data Flow | Provide QHP Agreement Materials | SERFF | Uni-Directional | HBE | | |
| SLN5 | 1 | 60 | SLN51.60 | Interface Data Flow | Enroll, Register, Dropout, Modify, Reconcile Plan | SERFF | Uni-Directional | HBE | | |
| SLN5 | 1 | 61 | SLN51.61 | Interface General | Verify Individual Incarceration Status Request | HBE | Uni-Directional | CMS | | |
| SLN5 | 1 | 62 | SLN51.62 | Physical Interface | Issuer (Carriers) Interface | HBE | Bi-Directional | Issuers | | |
| SLN5 | 1 | 63 | SLN51.63 | Interface Data Flow | Report: Monthly Enrollment Reports for Reconciliation | HBE | Uni-Directional | Issuers | | |
| SLN5 | 1 | 64 | SLN51.64 | Interface Data Flow | Report: Premium Payment History (monthly) | Premium Processor | Uni-Directional | Issuers | | |
| SLN5 | 1 | 65 | SLN51.65 | Interface Data Flow | Report: Issuer Premium Remittance (less user fees) Payment Transaction Information | Premium Processor | Uni-Directional | Issuers | | |
| SLN5 | 1 | 66 | SLN51.66 | Interface Data Flow | Report: APTC/CSR Payment | HBE | Uni-Directional | Issuers | | |
| SLN5 | 1 | 67 | SLN51.67 | Interface Data Flow | Employer Group Setup | HBE | Uni-Directional | Issuers | | |
| SLN5 | 1 | 68 | SLN51.68 | Interface Data Flow | Individual Enrollment Data - Plan, Premium, APTC/CSR, State Premium Subsidy, State CSR, Household Contribution Amount, HIPP | HBE | Bi-Directional | Issuers | | |
| SLN5 | 1 | 69 | SLN51.69 | Interface Data Flow | Notification of Individual Disenrollment from QHP | HBE | Bi-Directional | Issuers | | |
| SLN5 | 1 | 70 | SLN51.70 | Interface Data Flow | Notification of Renewals and Changes to Individual Enrollee | HBE | Bi-Directional | Issuers | | |
| SLN5 | 1 | 71 | SLN51.71 | Interface Data Flow | Individual or Employer Premium Payments | Premium Processor | Bi-Directional | Issuers | | |
| SLN5 | 1 | 72 | SLN51.72 | Interface Data Flow | CSR Funds | CMS | Uni-Directional | Issuers | | |
| SLN5 | 1 | 73 | SLN51.73 | Interface Data Flow | APTC Funds | CMS | Uni-Directional | Issuers | | |
| SLN5 | 1 | 74 | SLN51.74 | Interface Data Flow | Refund Remitted Overpayment | Issuers | Uni-Directional | Premium Processor | | |
| SLN5 | 1 | 75 | SLN51.75 | Interface Data Flow | Underpayment Notification | Premium Processor | Uni-Directional | Issuers | | |
| SLN5 | 1 | 76 | SLN51.76 | Interface Data Flow | Late Payment Notification | Premium Processor | Uni-Directional | Issuers | | |
| SLN5 | 1 | 77 | SLN51.77 | Physical Interface | ACCESS System Interface (State Systems) | ACCESS | Bi-Directional | HBE | | |
| SLN5 | 1 | 78 | SLN51.78 | Interface Data Flow | Process Individual Eligibility | ACCESS | Bi-Directional | HBE | | |
| SLN5 | 1 | 79 | SLN51.79 | Interface Data Flow | Create, Merge, Update, Match Customer | ACCESS | Bi-Directional | HBE | | |
| SLN5 | 1 | 80 | SLN51.80 | Interface Data Flow | HIPP | DFR | Uni-Directional | HBE | | |
| SLN5 | 1 | 81 | SLN51.81 | Interface Data Flow | Employment Qtrly Wage Report | DOL | Uni-Directional | HBE | | |
| SLN5 | 1 | 82 | SLN51.82 | Interface Data Flow | Unemployment Report | DOL | Uni-Directional | HBE | | |
| SLN5 | 1 | 83 | SLN51.83 | Interface Data Flow | HIPP Amount | HBE | Uni-Directional | DCF/ESD | | |
| SLN5 | 1 | 84 | SLN51.84 | Interface Data Flow | State CSR Amount | DCF/ESD | Uni-Directional | HBE | | |
| SLN5 | 1 | 85 | SLN51.85 | Interface Data Flow | State Premium Subsidy Amount | DCF/ESD | Uni-Directional | HBE | | |
| SLN5 | 1 | 86 | SLN51.86 | Interface Data Flow | Enroll, Register, Dropout, Modify, Reconcile Plan | HBE | Uni-Directional | ACCESS | | |
| SLN5 | 1 | 87 | SLN51.87 | Interface Data Flow | Operating Expense, Salary Information | HBE | Uni-Directional | DFR | | |
| SLN5 | 1 | 88 | SLN51.88 | Interface Data Flow | Head of Household Eligibility | VSHA | Uni-Directional | HBE | | |
| SLN5 | 1 | 89 | SLN51.89 | Interface Data Flow | Update individual status | VDH | Uni-Directional | HBE | | |
| SLN5 | 1 | 90 | SLN51.90 | Interface General | Verify Individual State Residency Status Request | Vital Records | Uni-Directional | HBE | | |
| SLN5 | 1 | 91 | SLN51.91 | Physical Interface | Siebel Interface | Siebel | Bi-Directional | ESB | | |
| SLN5 | 1 | 92 | SLN51.92 | Interface Data Flow | Data Flow between OLTP and OLAP | Siebel | Uni-Directional | Informatica | | |
| SLN5 | 1 | 93 | SLN51.93 | Physical Interface | OPA Interface | OPA | Bi-Directional | HBE | | |
| SLN5 | 1 | 94 | SLN51.94 | Interface Data Flow | Validate Customer | OPA | Bi-Directional | HBE | | |
| SLN5 | 1 | 95 | SLN51.95 | Interface Data Flow | Validate Citizenship | OPA | Bi-Directional | HBE | | |
| SLN5 | 1 | 96 | SLN51.96 | Interface Data Flow | Validate Tax Record | OPA | Bi-Directional | HBE | | |
| SLN5 | 1 | 97 | SLN51.97 | Interface Data Flow | Verify Individual Eligibility for MEC Request | HBE | Bi-Directional | OPA | | |
| SLN5 | 1 | 98 | SLN51.98 | Interface General | Verify Individual Eligibility for Employer Sponsored MEC Request | HBE | Bi-Directional | OPA | | |
| SLN5 | 1 | 99 | SLN51.99 | Interface Data Flow | Verify Individual Eligibility for other MEC for APTC and CSR Request | HBE | Bi-Directional | OPA | | |
| SLN5 | 1 | 100 | SLN51.100 | Interface Data Flow | HBE Notifies Individual Potential Eligibility Other Than MAGI | HBE | Bi-Directional | OPA | | |
| SLN5 | 1 | 101 | SLN51.101 | Physical Interface | OBIEE Interface | Siebel | Bi-Directional | OBIEE | | |
| SLN5 | 1 | 102 | SLN51.102 | Interface Data Flow | HBE Reporting Tool | Siebel | Bi-Directional | OBIEE | | |
| SLN5 | 1 | 103 | SLN51.103 | Physical Interface | MDM Interface | MDM | Bi-Directional | ESB | | |
| SLN5 | 1 | 104 | SLN51.104 | Interface Data Flow | Create, Merge, Update, Match, Fetch Customer | MDM | Bi-Directional | ACCESS | | |
| SLN5 | 1 | 105 | SLN51.105 | Interface Data Flow | Create, Merge, Update, Match, Fetch Customer | MDM | Bi-Directional | HBE | | |
| SLN5 | 1 | 106 | SLN51.106 | Physical Interface | Informatica (ETL Tool) Interface | Informatica | Bi-Directional | OBIEE | | |
| SLN5 | 1 | 107 | SLN51.107 | Interface Data Flow | Data Flow between OLTP and OLAP | Siebel | Uni-Directional | Informatica | | |
| SLN5 | 1 | 108 | SLN51.108 | Physical Interface | MMIS Interface | HBE | Uni-Directional | MMIS | | |
| SLN5 | 1 | 109 | SLN51.109 | Interface Data Flow | Daily/Monthly Individual Eligibility | HBE | Uni-Directional | MMIS | | |
| SLN5 | 1 | 110 | SLN51.110 | Interface Data Flow | Reconciliation Report | HBE | Uni-Directional | MMIS | | |
| SLN5 | 1 | 111 | SLN51.111 | Physical Interface | Call Center Interface | CC | Bi-Directional | HBE | | |
| SLN5 | 1 | 112 | SLN51.112 | Interface Data Flow | Problem Resolution | CC | Bi-Directional | HBE | | |
| SLN5 | 1 | 113 | SLN51.113 | Physical Interface | Content Management Interface | CM | Bi-Directional | HBE | | |
| SLN5 | 1 | 114 | SLN51.114 | Interface Data Flow | CM Data Flow | CM | Bi-Directional | Premium Processor | | |
| SLN5 | 1 | 115 | SLN51.115 | Physical Interface | ID Management Interface | IdM | Bi-Directional | HBE | | |
| SLN5 | 1 | 116 | SLN51.116 | Physical Interface | Scanning and paper processing interface | Scanning/Paper | Uni-Directional | HBE | | |
| SLN5 | 1 | 117 | SLN51.117 | Physical Interface | Peoplesoft Interface | PS | Bi-Directional | HBE | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| SLN5 | 1 | 118 | SLN51.118 | Physical Interface | | SOA/ESB Interface | ESB | Bi-Directional | HBE | | |

**SOV Consolidated Non-Functional Requirements Traceability Matrix (RTM)**
**MITA**

| Base | Level | Sub | Req ID New | Focus | Specifics | Requirement Description | Notes | Evidence |
|---|---|---|---|---|---|---|---|---|
| SLN6 | 1 | 1 | SLN6.1.1 | Modularity | | Solutions shall uses a modular, flexible approach to systems development, including the use of open interfaces and exposed Application Programming Interfaces (API); the separation of standardized business rule definitions from core programming; and the availability of standardized business rule definitions in both human and machine- readable formats. The States commit to formal system development methodology and open, reusable system architecture. | | |
| SLN6 | 1 | 2 | SLN6.1.2 | MITA | | States shall align to and advance increasingly in MITA maturity for business, architecture, and data by Conducting MITA Self Assessments, Developing MITA Roadmaps, Developing Concept of Operations (COO), and Business Process Models (BPM) | | |
| SLN6 | 1 | 3 | SLN6.1.3 | Industry Standards | | Solutions shall ensure alignment with, and incorporation of, industry standards: the Health Insurance Portability and Accountability Act of 1996 (HIPAA) security, privacy and transaction standards; accessibility standards established under section 508 of the Rehabilitation Act, or standards that provide greater accessibility for individuals with disabilities, and compliance with Federal Civil Rights laws; standards adopted by the Secretary under section 1104 of the Affordable Care Act; and standards and protocols adopted by the Secretary under section 1561 of the Affordable Care Act. Activity includes the following: Identification of industry standards and Incorporation of industry standards in requirements, development, and testing phases | | |
| SLN6 | 1 | 4 | SLN6.1.4 | Leverage | | State solutions should promote sharing, leverage, and reuse of Medicaid technologies and systems within and among States. Activity includes the following: Multi-state efforts, Availability for reuse, Identification of open source, cloud-based, and commercial products, Customization, and Transition and retirement plans | | |
| SLN6 | 1 | 5 | SLN6.1.5 | Business Results | | Systems should support accurate and timely processing of claims (including claims of eligibility), adjudications, and effective communications with providers, beneficiaries, and the public. Activity includes the following: Degree of automation, Customer Service, Performance standards and testing | | |
| SLN6 | 1 | 6 | SLN6.1.6 | Reporting | | Solutions should produce transaction data, reports, and performance information that contributes to program evaluation, continuous improvement in business operations, transparency, and accountability. Activity includes the following: Accurate data, Interfaces with designated federal repositories or hubs, Automatic generation of reports, Audit trails | | |
| SLN6 | 1 | 7 | SLN6.1.7 | Interoperability | | Systems must ensure seamless coordination and integration with the Exchanges (whether run by the state or federal government), and allow interoperability with health information exchanges, public health agencies, human services programs, and community organizations providing outreach and enrollment assistance services. Interactions with the Exchange, Interactions with other entities | | |

## SOV Consolidated Non-Functional Requirements Traceability Matrix (RTM)
## Rules

| Base | Level | Sub | Req ID New | Focus | Specifics | Requirement Description | Notes | Evidence |
|---|---|---|---|---|---|---|---|---|
| SLN7 | 1 | 1 | SLN7.1.1 | Rules | | Solutions shall support data verification and consistency checks. | | |
| SLN7 | 1 | 2 | SLN7.1.2 | Rules | | Solutions shall support seamless and easy user interaction | | |
| SLN7 | 1 | 3 | SLN7.1.3 | Rules | | Solutions shall provide context sensitive help and extensive documentation | | |
| SLN7 | 1 | 4 | SLN7.1.4 | Rules | | The Rules Engine must be able to submit business rules to a federal repository at such time as the repository exists. | | |
| SLN7 | 1 | 5 | SLN7.1.5 | Rules | | Solutions shall support high performance and scalability, including the following characteristics: - High performance for large rule bases (more than 20,000 rules) - Ability to share rule sets across multiple engines - Dynamic and static execution versions for performance - Multiple, cross-platform support - Segmented repositories - Pre-built rule paths - Rule pre-fetch to memory - Parallel rule search - Ability to compile rule sequences into base languages like C++, Java and C# | | |
| SLN7 | 1 | 6 | SLN7.1.6 | Rules | | Solutions shall support advanced inference features, including: - Truth maintenance to support parallel rule execution - Inductive and deductive problem sets supported - Recursive rules supported - Rule aggregation supported - Links to simulation capabilities - Agent or daemon links - Object inheritance supported - Multiple-engine support | | |
| SLN7 | 1 | 7 | SLN7.1.7 | Rules | | Solutions shall include rule management features for the execution engine, including: - Rule extensibility - Rule mapping to owners and stewards - Rule change impact analysis purposes - itegration/coordination of distributed rule engines with a corporate master - Ability to rerun the engine for a point which has passed (for example, after 1 January, still able to rerun year-end jobs with 31 December rules) - Ability to enter new rules or changes to become effective on a future date (for example, ability to put in the rule changes for 1 January in December) - Rule consistency/collision checks - Rule versioning - Release versioning and rollback - Rule security | | |
| SLN7 | 1 | 8 | SLN7.1.8 | Rules | | Solutions shall include a rule repository for global rule management, including: - nomadic support - an extensible meta model - rule merge support - versioning/lockout - rule promotion - change management - electronic rule distribution (publish or subscribe) - security | | |
| SLN7 | 1 | 9 | SLN7.1.9 | Rules | | Solutions shall support ease of use in operation/development and administration, including: i. Rule-firing audit report capabilities ii. Rule views by project or role iii. Ability to be used as a wizard/plug-in for multiple development environments iv. Dynamic rule change supported v. Rules separated from the engine vi. Constraints naturally supported | | |
| SLN7 | 1 | 10 | SLN7.1.10 | Rules | | Solutions shall provide the capability to associate effective dates with each program and rule in the rules engine. | | |
| SLN7 | 1 | 11 | SLN7.1.11 | Rules | | Solutions shall support Compute values based on input data | | |
| SLN7 | 1 | 12 | SLN7.1.12 | Rules | | Solutions shall provide the capability to associate a rule with multiple program profiles. | | |
| SLN7 | 1 | 13 | SLN7.1.13 | Rules | | Solutions shall provide the capability to identify and apply a rule change appropriately to existing cases. | | |
| SLN7 | 1 | 14 | SLN7.1.14 | Rules | | Solutions shall provide the capability to copy an existing rule to create a new rule. | | |
| SLN7 | 1 | 15 | SLN7.1.15 | Rules | | Solutions shall provide the ability to identify all other rules that are dependent on a specific rule by allowing rules association | | |
| SLN7 | 1 | 16 | SLN7.1.16 | Rules | | Solutions shall provide the capability to generate and display a flow chart of each program profile. | | |
| SLN7 | 1 | 17 | SLN7.1.17 | Rules | | Solutions shall provide the ability to maintain and display the history of each rule change in the rules engine. | | |
| SLN7 | 1 | 18 | SLN7.1.18 | Rules | | Solutions shall provide the capability to add additional table-driven variables to support new regulations using a rules engine. | | |
| SLN7 | 1 | 19 | SLN7.1.19 | Rules | | Solutions shall include an automated rule build capability for rule repository propagation through the environments Development, Integration/Test, User Acceptance Testing and Production. | | |
| SLN7 | 1 | 20 | SLN7.1.20 | Rules | | Solutions shall support the selection of business process path | | |
| SLN7 | 1 | 21 | SLN7.1.21 | Rules | | Solutions shall have the ability to expose sets of interrelated rules in the rules repository as either a web service and/or in a interactive, web-based interview format. | | |
| SLN7 | 1 | 22 | SLN7.1.22 | Rules | | Solutions shall have the ability to create customizable web-based, interview sessions based on defined rule sets. | | |
| SLN7 | 1 | 23 | SLN7.1.23 | Rules | | The Solution must facilitate the creation and maintenance of rules referencing complex data relationships this will include, but not be limited to, rules referencing complex many-to-many relationships between entity types | | |
| SLN7 | 1 | 24 | SLN7.1.24 | Rules | | The Solution must have the ability for text documentation and meta-data to be included as part of the rules repository. | | |
| SLN7 | 1 | 25 | SLN7.1.25 | Rules | | The Solution will have documentation for assisting rule authors and administrators with best practices for rule repository creation and maintenance, repository check-in/checkout, repository promotion across environments. | | |

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|---|---|---|---|---|---|---|---|---|
| SLN7 | 1 | 26 | SLN7.1.26 | Rules | | The Vendor shall partner with the AHS management and Rule Author(s) to design suitable policy models for Eligibility Determination and other rules to be automated using the proposed Rules Management System. | | |
| SLN7 | 1 | 27 | SLN7.1.27 | Rules | | The Vendor shall transform all of the state's health-benefit program rules into a format that can be consumed by the proposed Rules Management System. | | |
| SLN7 | 1 | 28 | SLN7.1.28 | Rules | | The Vendor shall assist the State with creating a process and systems capability that posts formal rules to the web for general review by the public. | | |
| SLN7 | 1 | 29 | SLN7.1.29 | Rules | | The Vendor shall create the program rules in the proposed Rules Management System and test them in an established environment. | | |
| SLN7 | 1 | 30 | SLN7.1.30 | Rules | | The Vendor shall create a valid set of rules to transition from the current mainframe system to the proposed Rules Management system in preparation for the new SOA system. | | |
| SLN7 | 1 | 31 | SLN7.1.31 | Rules | | The Vendor rules management team will work with and Mentor the State staff Rule Author(s) in the best practices of:<br>- Converting rules from federal or legislative documents into properly structured rules that can be consumed by the proposed Rules Management System and writing future rules in such a way that eases the transition<br>- Capturing meta-data about each of the rules sets and how they function | | |
| SLN7 | 1 | 32 | SLN7.1.32 | Rules | | The Vendor shall provide guidance on:<br>- How best to store and look up the meta-data<br>- Defining the Lifecycle of rule sets<br>- How to integrate or flow rules<br>- How to provide help or commentary on rules<br>- General use of the proposed Rules Management System | | |
| SLN7 | 1 | 33 | SLN7.1.33 | Rules | | The Vendor shall provide selected State staff with holistic education on the proposed Rules Management system that includes (but is not limited to):<br>- Knowledge about how the proposed Rules Management system works<br>- Knowledge about how to structure the Rule Author(s) to meet the Agency goals<br>- Knowledge about how to create, maintain and update rules in the proposed Rules Management system | | |
| SLN7 | 1 | 34 | SLN7.1.34 | Rules | | Solutions shall support mechanisms and ease of use for users to edit rules. | | |
| SLN7 | 1 | 35 | SLN7.1.35 | Rules | | The Vendor must follow all standards defined by CMS in Guidance for Exchange and Medicaid Technology Systems and Enhanced Funding Requirements: Seven Conditions and Standards; and other federal guidelines yet to be defined; including use a technology neutral rules repository. | | |
| SLN7 | 1 | 36 | SLN7.1.36 | Rules | | Solutions shall support design for a multi-step decision | | |
| SLN7 | 1 | 37 | SLN7.1.37 | Rules | | Solutions shall have the ability to tune individual steps in the overall decision process for maximum performance by the execution engine | | |
| SLN7 | 1 | 38 | SLN7.1.38 | Rules | | Solutions shall support reporting requirements either natively or integrate with other reporting tools to provide reporting | | |
| SLN7 | 1 | 39 | SLN7.1.39 | Rules | | Solutions shall support repository infrastructure for rule storage and versioning | | |

## SOV Consolidated Non-Functional Requirements Traceability Matrix (RTM)
## Portal

| Base | Level | Sub | Req ID New | Focus | Specifics | Requirement Description | Notes | Evidence |
|---|---|---|---|---|---|---|---|---|
| SLN8 | 1 | 1 | SLN8.1.1 | | | Solutions shall provide a portal UI framework that separates content from logic and is robust, scalable and interoperable with W3C Web-based standards. | | |
| SLN8 | 1 | 2 | SLN8.1.2 | | | Solutions shall provide content metadata attributes for portal extensibility. | | |
| SLN8 | 1 | 3 | SLN8.1.3 | | | Solutions shall provide multimedia Web content management capabilities. | | |
| SLN8 | 1 | 4 | SLN8.1.4 | | | Solutions shall provide wiki- and blog-based capabilities | | |
| SLN8 | 1 | 5 | SLN8.1.5 | | | Solutions shall provide XHTML e-form capabilities. | | |
| SLN8 | 1 | 6 | SLN8.1.6 | | | Solutions shall provide survey engine capabilities. | | |
| SLN8 | 1 | 7 | SLN8.1.7 | | | Solutions shall provide chat and instant messaging (IM) support. | | |
| SLN8 | 1 | 8 | SLN8.1.8 | | | Solutions shall provide the capability to consume externally available mapping Web services. | | |
| SLN8 | 1 | 9 | SLN8.1.9 | | | Solutions shall provide portlet capabilities. | | |
| SLN8 | 1 | 10 | SLN8.1.10 | | | Solutions shall provide inter-portlet communications that are robust, scalable and reliable. | | |
| SLN8 | 1 | 11 | SLN8.1.11 | | | Solutions shall provide search engine capabilities. | | |
| SLN8 | 1 | 12 | SLN8.1.12 | | | Solutions shall provide session management capabilities to support user sessions and coordinated back-end application functionality. | | |
| SLN8 | 1 | 13 | SLN8.1.13 | | | Solutions shall provide taxonomy-based cataloging of portal resources. | | |
| SLN8 | 1 | 14 | SLN8.1.14 | | | Solutions shall provide index-based search capabilities. | | |
| SLN8 | 1 | 15 | SLN8.1.15 | | | The Solution must allow for user analytics to be captured and reported | | |
| SLN8 | 1 | 16 | SLN8.1.16 | | | Solutions shall provide support for multiple languages and character set encoding standards. | | |
| SLN8 | 1 | 17 | SLN8.1.17 | | | Solutions shall provide portal personalization and customization capabilities for the constituent user experience. | | |
| SLN8 | 1 | 18 | SLN8.1.18 | | | Solutions shall support access from multiple channels and devices. | | |
| SLN8 | 1 | 19 | SLN8.1.19 | | | Solutions shall provide support for Web content management solution that is robust and scalable. | | |
| SLN8 | 1 | 20 | SLN8.1.20 | | | Solutions shall provide time-based content expiration and version management capabilities. | | |
| SLN8 | 1 | 21 | SLN8.1.21 | | | Solutions shall provide Web content management workflow management. | | |
| SLN8 | 1 | 22 | SLN8.1.22 | | | Solutions shall provide syndicated content capabilities including creation and subscription to RSS feeds | | |

## SOV Consolidated Non-Functional Requirements Traceability Matrix (RTM)
## ECM

| Base | Level | Sub | Req ID New | Focus | Specifics | Requirement Description | Notes | Evidence |
|---|---|---|---|---|---|---|---|---|
| SLN9 | 1 | 1 | SLN9.1.1 | | | Solutions shall provide the ability to capture solution-generated documents and store them at appropriate level (e.g. individual, case, program, application, various workflow/process) | | |
| SLN9 | 1 | 2 | SLN9.1.2 | | | Solutions shall ensure version control of documents as they are changed or modified | | |
| SLN9 | 1 | 3 | SLN9.1.3 | | | Solutions shall allow rollback to a previous version of a document | | |
| SLN9 | 1 | 4 | SLN9.1.4 | | | Solutions shall enable collaborative document creation and/or markup | | |
| SLN9 | 1 | 5 | SLN9.1.5 | | | Solutions shall enable attachment of documents to e-mails and e-mail distribution lists | | |
| SLN9 | 1 | 6 | SLN9.1.6 | | | Solutions shall utilize the solutions authorization and access control for file level security | | |
| SLN9 | 1 | 7 | SLN9.1.7 | | | Solutions shall have the ability to, based on rules or context, automate the creation of indexing, meta data and overall taxonomy | | |
| SLN9 | 1 | 8 | SLN9.1.8 | | | Solutions shall have robust bulk load and conversion features | | |
| SLN9 | 1 | 9 | SLN9.1.9 | | | Solutions shall provide the capability to communicate natively with the document management API | | |
| SLN9 | 1 | 10 | SLN9.1.10 | | | Solutions shall provide the capability to access the output of the document management system over the Internet and/or Intranet web sites. | | |
| SLN9 | 1 | 11 | SLN9.1.11 | | | Solutions shall develop a user guide that can be accessed online and printed on demand. | | |
| SLN9 | 1 | 12 | SLN9.1.12 | | | Solutions shall provide the ability to store electronic forms (solution generated or 3rd-party generated forms) | | |
| SLN9 | 1 | 13 | SLN9.1.13 | | | Solutions shall provide the capability for online access to policy and procedure and training materials. | | |
| SLN9 | 1 | 14 | SLN9.1.14 | | | Solutions shall be integrated with document processing center workflow. | | |
| SLN9 | 1 | 15 | SLN9.1.15 | | | Solutions shall provide scanning software that is configurable to accommodate user-defined field edits such as the exclusion or inclusion of special characters. | | |
| SLN9 | 1 | 16 | SLN9.1.16 | | | Solutions shall accommodate multiple imaging locations. | | |
| SLN9 | 1 | 17 | SLN9.1.17 | | | Solutions shall integrate the Imaging and Document Management System with VT HSE Platform. | | |
| SLN9 | 1 | 18 | SLN9.1.18 | | | Solutions shall provide the capability to access VT HSE Platform to extract data to pre-populate index fields, and/or values on forms. | | |
| SLN9 | 1 | 19 | SLN9.1.19 | | | Solutions shall provide the capability to send and receive faxed and e-form documents, process the data and image directly into and out of the system including the ability to automatically send confirmation of transmission to the sender. | | |
| SLN9 | 1 | 20 | SLN9.1.20 | | | Solutions shall provide the capability for performing conditional routing that will send documents to a specific queue or inbox, either manually or electronically, based on preset conditions as defined by the User. | | |
| SLN9 | 1 | 21 | SLN9.1.21 | | | Solutions shall provide the capability to store and view a multiple page document as a single document. | | |
| SLN9 | 1 | 22 | SLN9.1.22 | | | Solutions shall provide the capability to attach notes, annotations, e-mails and other documents to an original scanned document at any time without rescanning. | | |
| SLN9 | 1 | 23 | SLN9.1.23 | | | Solutions shall provide the capability to scan and store imaged documents and electronic files | | |
| SLN9 | 1 | 24 | SLN9.1.24 | | | Solutions shall provide the capability to notify the user when a duplicate document has been received so the user can decide whether to use the previously received document, replace the existing document or store the new document | | |
| SLN9 | 1 | 25 | SLN9.1.25 | | | Solutions shall provide the capability to link imaged documentation together and link it to an individual and/or cases within VT HSE Platform. | | |

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| SLN9 | 1 | 26 | SLN9.1.26 | | | Solutions shall provide the capability to record user and workstation identification for each document processed, accessed or updated. | | |
| SLN9 | 1 | 27 | SLN9.1.27 | | | Solutions shall provide the capability for documents to be grouped together during scanning based on user defined criteria. | | |
| SLN9 | 1 | 28 | SLN9.1.28 | | | Solutions shall provide the capability to allow the User to manually remove, rescan and replace a previously scanned image or document(s). | | |
| SLN9 | 1 | 29 | SLN9.1.29 | | | Solutions shall provide the capability to employ user-defined form/template, indexes and/or field values for recognition and retrieval of documents. | | |
| SLN9 | 1 | 30 | SLN9.1.30 | | | Solutions shall provide the capability to validate data captured from specific fields on forms electronically read by OCR/OMR/ICR. | | |
| SLN9 | 1 | 31 | SLN9.1.31 | | | Solutions shall provide the capability for archived documents to be retrieved and re-indexed. | | |
| SLN9 | 1 | 32 | SLN9.1.32 | | | Solutions shall provide the capability to permanently delete documents based on user defined criteria. | | |
| SLN9 | 1 | 33 | SLN9.1.33 | | | Solutions shall provide the capability to interface with other imaging systems using industry standard interfaces and file formats. | | |
| SLN9 | 1 | 34 | SLN9.1.34 | | | Solutions shall enable indexing and searching of documents by a variety of user-defined metadata attributes | | |
| SLN9 | 1 | 35 | SLN9.1.35 | | | Solutions shall provide the capability to version multiple copies of scanned documents. | | |
| SLN9 | 1 | 36 | SLN9.1.36 | | | Solutions shall provide the capability to scan at least 80 pages per minute. | | |
| SLN9 | 1 | 37 | SLN9.1.37 | | | Solutions shall provide image retrieval response times within a minimum of two seconds for all documents stored in the system. | | |
| SLN9 | 1 | 38 | SLN9.1.38 | | | Solutions shall provide the capability for simplex and duplex scanning. | | |
| SLN9 | 1 | 39 | SLN9.1.39 | | | Solutions shall provide an imaging solution that includes advanced Optical Character Recognition, Intelligent Character Recognition, and Optical Mark Recognition capabilities with a minimum 90% accuracy rate and the ability to regulate the | | |
| SLN9 | 1 | 40 | SLN9.1.40 | | | Solutions shall provide audit trail functions with the ability to log every step in the process to a database for query and reporting purposes. | | |
| SLN9 | 1 | 41 | SLN9.1.41 | | | Solutions shall automatically calculate transfer and destruction dates (and assign records ready for deletion to the appropriate review process for approval of final deletion) for all records in the retention schedules. | | |
| SLN9 | 1 | 42 | SLN9.1.42 | | | Solutions shall provide email notification of disposition results | | |
| SLN9 | 1 | 43 | SLN9.1.43 | | | Solutions shall include a workflow tool to support the records management process | | |
| SLN9 | 1 | 44 | SLN9.1.44 | | | Solutions shall provide support for full text search | | |
| SLN9 | 1 | 45 | SLN9.1.45 | | | Solutions shall allow users to manually or automatically classify records or classified automatically based on a policy/rules engine | | |
| SLN9 | 1 | 46 | SLN9.1.46 | | | Solutions shall allow administrators and authorized users to create, apply, view or remove legal holds for individual or multiple records | | |
| SLN9 | 1 | 47 | SLN9.1.47 | | | Solutions shall enable declaration of email:<br>• From Microsoft Outlook as records using drag-and-drop or menu functions<br>• As it is inbound to and outbound from the email system<br>• In Microsoft Outlook journal folders | | |
| SLN9 | 1 | 48 | SLN9.1.48 | | | Solutions shall have the capability to produce colored and bar-coded labels created for physical records | | |
| SLN9 | 1 | 49 | SLN9.1.49 | | | Solutions shall have the capability to check records in and out using barcodes, with adherence to security permissions and support the use of barcode scanners for the purpose | | |
| SLN9 | 1 | 50 | SLN9.1.50 | | | Solutions shall have the capability to track all types and sizes of storage containers within storage locations | | |
| SLN9 | 1 | 51 | SLN9.1.51 | | | Solutions shall be compliant with U.S. Department of Defense 5015.2-STD Electronic Records Management Standard | | |

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| SLN9 | 1 | 52 | SLN9.1.52 | | | Solutions shall have the ability for an administrator to create and maintain retention schedules | | |
| SLN9 | 1 | 53 | SLN9.1.53 | | | Solutions shall have the ability to create disposition, legal hold and audit reports for the records | | |
| SLN9 | 1 | 54 | SLN9.1.54 | | | Solutions shall provide content authoring capabilities including:<br>• Provide a structured container for the content (e.g. document)<br>• Support reuse via Copy and Paste or "Save As"<br>• Tracking of changes to content within a container<br>• Drag-and-drop page layout<br>• Ability for collaboration by allowing the "single control" to transfer between authors, reviewers and authorizers<br>• Real-time active collaboration allowing multiple authors to review and update the content in a container during the course of a shared session<br>• Standard templates to make authoring documents within certain parameters<br>• Facilitate the use of Microsoft Office creation tools to submit content directly into the WCM repository<br>• The bulk import and export of XML content for integration and migration<br>• Reuse of content and templates to enforce a common "look and feel" and brand identity<br>• A flexible and extensible workflow to manage authoring review and approval of content across its life cycle<br>• The ability to expire and retire content. | | |
| SLN9 | 1 | 55 | SLN9.1.55 | | | Solutions shall provide built-in viewers/converters for a wide variety of file types | | |
| SLN9 | 1 | 56 | SLN9.1.56 | | | Solutions shall support the combination of text and other page elements, such as graphics, logos and buttons and multimedia, such as audio/video and Flash. | | |
| SLN9 | 1 | 57 | SLN9.1.57 | | | Solutions shall include the ability to support content in multiple languages | | |
| SLN9 | 1 | 58 | SLN9.1.58 | | | Solutions shall support multiple versions of the same site using the same WCM instance and repository | | |
| SLN9 | 1 | 59 | SLN9.1.59 | | | Solutions shall display content targeted toward specific user profiles | | |
| SLN9 | 1 | 60 | SLN9.1.60 | | | Solutions shall target content based on visitor-supplied preferences | | |
| SLN9 | 1 | 61 | SLN9.1.61 | | | Solutions shall personalize a site based on customer transaction data, apply personalization rules to elements smaller than pages and use perceived behavior employing mechanisms to assess the behavior of an individual user (known or unknown) in real time and enable choice of delivered content based on that analysis) | | |
| SLN9 | 1 | 62 | SLN9.1.62 | | | Solutions shall provide reporting of<br>• The status and history of a piece of content | | |
| SLN9 | 1 | 63 | SLN9.1.63 | | | Solutions shall provide out-of-the-box log file analysis | | |
| SLN9 | 1 | 64 | SLN9.1.64 | | | Solutions shall have the ability to find broken links and repair them | | |
| SLN9 | 1 | 65 | SLN9.1.65 | | | Solutions shall the capability to track and report on-site use and demographics | | |
| SLN9 | 1 | 66 | SLN9.1.66 | | | Solutions shall provide digital rights management capabilities | | |
| SLN9 | 1 | 67 | SLN9.1.67 | | | Solutions shall provide content publication capabilities including:<br>• Support in-context (what you see is what you get [WYSIWYG]) editing and the ability to preview rendered content in a | | |
| SLN9 | 1 | 68 | SLN9.1.68 | | | Solutions shall provide check In/check out functionality for electronic documents | | |
| SLN9 | 1 | 69 | SLN9.1.69 | | | Solutions shall provide notification features for files that are checked out (over due, availability, etc.) | | |
| SLN9 | 1 | 70 | SLN9.1.70 | | | For document management functions, solutions shall utilize a centralized, shared document management/content management solution. | | |

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| SLN9 | 1 | 71 | SLN9.1.71 | | | Solutions will ensure secure access to electronic records | | |
| SLN9 | 1 | 72 | SLN9.1.72 | | | Solutions will retain archived records according to state and federal retention guidelines | | |
| SLN9 | 1 | 73 | SLN9.1.73 | | | Solutions will develop a classification scheme to label records, including electronic record | | |
| SLN9 | 1 | 74 | SLN9.1.74 | | | Solutions will label records, including electronic records, according to classification scheme | | |
| SLN9 | 1 | 75 | SLN9.1.75 | | | Solutions will be able to view the latest version or all versions of a document | | |
| SLN9 | 1 | 76 | SLN9.1.76 | | | Solutions will provide a mechanism to accept and link to documents received in a centralized document management system | | |

## SOV Consolidated Non-Functional Requirements Traceability Matrix (RTM)
## DBMS

| Base | Level | Sub | Req ID New | Focus | Specifics | Requirement Description | Notes | Evidence |
|---|---|---|---|---|---|---|---|---|
| SLN10 | 1 | 1 | SLN10.1.1 | DBMS | | The RDBMS shall lock database records based on various parameters (e.g., at row level, field level, or at the application level). | | |
| SLN10 | 1 | 2 | SLN10.1.2 | DBMS | | The RDBMS shall have the ability to optimize performance in transaction processing versus report processing | | |
| SLN10 | 1 | 3 | SLN10.1.3 | DBMS | | The RDBMS shall use history tracking within the database and logging options (e.g., transaction auditing) | | |
| SLN10 | 1 | 4 | SLN10.1.4 | DBMS | | The RDBMS shall assure transaction integrity (e.g., rollback, validity checking, referential integrity, other). | | |
| SLN10 | 1 | 5 | SLN10.1.5 | DBMS | | The RDBMS shall handle record locking (e.g., row, field, other) and record updating/committing. | | |
| SLN10 | 1 | 6 | SLN10.1.6 | DBMS | | Solutions shall support indexing technology (multiple types of Indexing shall be available to tune performance of SQL statement). | | |
| SLN10 | 1 | 7 | SLN10.1.7 | DBMS | | Solutions shall provide the ability to optimize individual queries and support parallelizing a query to run on multiple CPUs at the same time to increase performance. | | |
| SLN10 | 1 | 8 | SLN10.1.8 | DBMS | | Solutions shall manage multiple query queue entries in parallel. | | |
| SLN10 | 1 | 9 | SLN10.1.9 | DBMS | | Solutions shall offer tools to manage and control disparate mixed workloads in a Database Management Solution (DBMS) environment. | | |
| SLN10 | 1 | 10 | SLN10.1.10 | DBMS | | The RDBMS must have the ability to maintain security based upon appropriate roles | | |
| SLN10 | 1 | 11 | SLN10.1.11 | DBMS | | The RDBMS must have data replication capabilities to external file formats or other RDBM Systems. The RDBMS must have data replication capabilities to external file formats or other RDBM Systems. | | |
| SLN10 | 1 | 12 | SLN10.1.12 | DBMS | | The RDBMS shall accommodate separate instances of databases. | | |
| SLN10 | 1 | 13 | SLN10.1.13 | DBMS | | Solutions shall have full and incremental backup and recovery capabilities on both a regular schedule and an ad hoc basis, including redundant offsite back-ups. | | |
| SLN10 | 1 | 14 | SLN10.1.14 | DBMS | | Provide the capability to allow for the continued use of the system during back-ups. | | |
| SLN10 | 1 | 15 | SLN10.1.15 | DBMS | | The RDBMS must support geo-encode address data and store geo-data coordinates (longitude and latitude). The RDBMS must support geo-encode address data and store geo-data coordinates (longitude and latitude). | | |
| SLN10 | 1 | 16 | SLN10.1.16 | DBMS | | Solutions shall assist the State in developing procedures to ensure that specified data is archived and protected from loss, unauthorized access, or destruction. | | |
| SLN10 | 1 | 17 | SLN10.1.17 | DBMS | | Solutions shall maintain all data according to state defined records retention guidelines. | | |
| SLN10 | 1 | 18 | SLN10.1.18 | DBMS | | Solutions shall maintain all images and electronic documents according to state defined document retention guidelines. | | |
| SLN10 | 1 | 19 | SLN10.1.19 | DBMS | | Solutions shall provide on-line access of up to 60 months of data to be used for processing eligibility. | | |
| SLN10 | 1 | 20 | SLN10.1.20 | DBMS | | The RDBMS shall support online modifications to database structures with minimal user downtime. | | |
| SLN10 | 1 | 21 | SLN10.1.21 | DBMS | | The System shall allow for data and transaction replication including, but not limited to, copying an instance of any database to specified locations (e.g. SAN, Multi-site implementations) | | |
| SLN10 | 1 | 22 | SLN10.1.22 | DBMS | | The RDBMS shall provide standard data extraction API to allow import and export of data. | | |
| SLN10 | 1 | 23 | SLN10.1.23 | DBMS | | The RDBMS shall provide documented best practices including but not limited to optimum database configuration, client maintenance and change control. | | |
| SLN10 | 1 | 24 | SLN10.1.24 | DBMS | | The RDBMS shall handle load balancing and/or clustering ability for extended scalability and performance | | |
| SLN10 | 1 | 25 | SLN10.1.25 | DBMS | | The RDBMS shall avail the capacity planning model for database configuration. | | |
| SLN10 | 1 | 26 | SLN10.1.26 | DBMS | | The RDBMS supports advanced configurations for data caching (e.g., support of client/application caching, support of server caching etc) | | |
| SLN10 | 1 | 27 | SLN10.1.27 | DBMS | | The business analytics solution shall not impact transactional database performance. | | |

## SOV Consolidated Non-Functional Requirements Traceability Matrix (RTM)
## Technical Architecture

| Base | Level | Sub | Req ID New | Focus | Specifics | Requirement Description | Notes | Evidence |
|---|---|---|---|---|---|---|---|---|
| SLN11 | 1 | 1 | SLN11 1.1 | Business Intelligence | | The standard business intelligence tool shall be Oracle Business Intelligence EE with the BI Management Pack, Contact Center Telephony Analytics, Service Analytics, Partner Analytics, and Case Management Analytics compatible with the standard database. | | |
| SLN11 | 1 | 2 | SLN11 1.2 | BPM Suite | | The standard BPM suite shall be Oracle Unified Business Process Management Suite | | |
| SLN11 | 1 | 3 | SLN11 1.3 | Content management | | The standard Content Management tool shall be Oracle WebCenter Suite Plus which adds the following components: Document Management, Web Content Management (WCM), Digital Asset Management (DAM), Records Management, WebCenter Content Conversion, Java SE, and WebCenter Imaging | | |
| SLN11 | 1 | 4 | SLN11 1.4 | Database | | The standard database management system (DBMS) shall be Oracle Database EE with the following add-ons: Real Application Clusters, Advanced Security, Active Data Guard, Diagnostics Pack, Tuning Pack, Change Management pack, Provisioning and Patch Automation Pack, Configuraiton Management Pack for Oracle database, Data Masking Pack, Database Vault, Security Enterprise Search, and Secure Enterprise Search Connector for Siebel | | |
| SLN11 | 1 | 5 | SLN11 1.5 | Data Integration Tools / ETL | | The standard ETL and data warehousing tools shall be Oracle Data Integrator/Infromatica Power Center and Oracle Warehouse Builder | | |
| SLN11 | 1 | 6 | SLN11 1.6 | Identity Management | | The standard Identity Management platform shall be Oracle Identity and Access Management Suite Plus | | |
| SLN11 | 1 | 7 | SLN11 1.7 | Master Data Management Tool | | The standard MDM technology components shall be Oracle Customer Hub Data Steward + B2B + B2C, Oracle Activity Hub B2B + B2C | | |
| SLN11 | 1 | 8 | SLN11 1.8 | Portal | | The standard tool for developing portal solutions shall be Oracle WebCenter Suite. The LifeRay portal may be used to support HBE and IE-specific functionality | | |
| SLN11 | 1 | 9 | SLN11 1.9 | Rules Management | | The standard rules management platform shall be Oracle Policy Automation, Oracle Policy Automation, and Oracle Policy Automation Connector for Siebel | | |
| SLN11 | 1 | 10 | SLN11 1.10 | SOA Solution | | The standard SOA technology components shall be Oracle SOA Suite and related Fusion Middleware (FMW) | | |
| SLN11 | 1 | 11 | SLN11 1.11 | SOA Governance | | The standard repository and service registry tools shall be Oracle's Enterprise Repository and Service Registry | | |
| SLN11 | 1 | 12 | SLN11 1.12 | CRM | | The standard solution for CRM/Case Management/Call Center shall be the following Siebel components: CRM Base, Public Sector CRM Base, Siebel Tools, Public Sector Partner Portal, Partner Portal, Financial Services CRM Base Option, and Public Sector eService | | |
| SLN11 | 1 | 13 | SLN11 1.13 | Application Server | | The standard JEE application server shall be Oracle WebLogic Server (OWLS) | | |
| SLN11 | 1 | 14 | SLN11 1.14 | CTI Component | | The standard CTI component shall beSiebel CTI | | |
| SLN11 | 1 | 15 | SLN11 1.15 | CRM Data Quality | | The standard data quality component for Siebel shall beSiebel Data Quality | | |
| SLN11 | 1 | 16 | SLN11 1.16 | CRM Call Answering and Service | | The standard CRM call answering service shall be Siebel Smart Answer Connector & Service | | |
| SLN11 | 1 | 17 | SLN11 1.17 | | | | | |
| SLN11 | 1 | 18 | SLN11 1.18 | CRM Email Response | | The standard email response component for CRM shall be Siebel Email Response | | |
| SLN11 | 1 | 19 | SLN11 1.19 | CRM HelpDesk | | The standard help desk component for Siebel shall beSiebel HelpDesk Option | | |
| SLN11 | 1 | 20 | SLN11 1.20 | CRM Group Policy | | The standard group policy component shall be CRM Group Policies | | |

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| SLN11 | 1 | 21 | SLN11 1.21 | Siebel Individual Coverage | | The standard componet for tracking individual coverage shall be Siebel Individual Coverage | | |
| SLN11 | 1 | 22 | SLN11 1.22 | CRM Web Channel for Customers | | The standard web channel for CRM shall be Siebel CRM Web Channel for Customers | | |
| SLN11 | 1 | 23 | SLN11 1.23 | CRM Test Automation | | The standard Siebel test automation component shall be CRM Test Automation Interfaces | | |
| SLN11 | 1 | 24 | SLN11 1.24 | CRM Remote Client | | The standard remote client for CRM shall be Siebel Remote Client | | |
| SLN11 | 1 | 25 | SLN11 1.25 | CRM Field Service | | The standard field service component shall be CRM Field Service | | |
| SLN11 | 1 | 26 | SLN11 1.26 | CRM Scheduler | | The standard CRM scheduling component shall be Oracle Real-time Scheduler | | |
| SLN11 | 1 | 27 | SLN11 1.27 | Data Quality | | The standard data quality modules shall be Oracle Enterprise Data Quality Match & Merge, Parsing & Standardization, Profile & Audit, and Address Validation Server | | |
| SLN11 | 1 | 28 | SLN11 1.28 | User Training Playback | | The standard user training playback tool shall be Oracle User Productivity Kit (UPK) Enterprise User and Developer | | |
| SLN11 | 1 | 29 | SLN11 1.29 | Application Integration | | The standard application integration toolkit shall be Oracle Oracle Customer Master Data Management Integration Base Pack, Oracle AIA Foundation Pack, Oracle Customer Master Data Management Integration Option for Siebel CRM, and Siebel Field Service Integration to Oracle Real-time Scheduler | | |
| SLN11 | 1 | 30 | SLN11 1.31 | Application Managmement | | The standard application management pack for CRM shall be Oracle Application Management Suite for Siebel | | |
| SLN11 | 1 | 31 | SLN11 1.32 | Application Server | | The standard application server shall be Oracle WebLogic Suite | | |
| SLN11 | 1 | 32 | SLN11 1.33 | SOA Management | | The standard soa management pack shall be Oracle SOA Management Pack EE | | |
| SLN11 | 1 | 33 | SLN11 1.34 | Application Server management | | The standard application server management component shall be Oracle Weblogic Server Management pack EE | | |
| SLN11 | 1 | 34 | SLN11 1.35 | Audit Components | | The standard database audit tools shall be Oracle Audit Vault Server and Collection Agent | | |
| SLN11 | 1 | 35 | SLN11 1.36 | Portal Management | | The standard portal management component shall be Oracle Management Pack for WebCenter Suite | | |
| SLN11 | 1 | 36 | SLN11 1.37 | SOA Healthcare Adapter | | The standard healthcare integration components for SOA shall be Oracle Healthcare Adapter | | |
| SLN11 | 1 | 37 | SLN11 1.38 | Content Management Integration | | The standard content management adapters shall be Oracle WebCenter Applications Adapter for Siebel and WebCenter Adapter for Microsoft | | |
| SLN11 | 1 | 38 | SLN11 1.39 | Identity Analytics | | The standard IdM analytics component shall be Oracle Identity Analytics | | |
| SLN11 | 1 | 39 | SLN11 1.40 | IdM Connectors | | The standard IdM Connectors shall be Oracle's connectors for Oracle DBMS Tables, Oracle DBMS, MSFT AD, MSFT Exchange, PSFT Enterprise Applications, MSFT Windows, Unix, RSA Authentication Manager, Siebel Enterprise Applications, and IBM RACF | | |
| SLN11 | 1 | 40 | SLN11 1.41 | IdM Management | | The standard IdM management component shall be Oracle Management Pack Plus for Identity Management | | |
| SLN11 | 1 | 41 | SLN11 1.42 | OneGate | | The standard external facing portal for Exchange and Integration Eligibility capabilities shall be Exeter OneGate suite, this solution supports the Citizen view, Small Business view, Broker view, Navigator view, and Customer Service view (or exchange data/content) and contains adapters/connectors to Sieble and LifeRay web portal. | | |
| SLN11 | 1 | 42 | SLN11 1.42 | Thunderhead | | The standard correnspondence management tool shall be Thurderhead suite that enables the generation and management of official letters/correspondece to potential enrollees, enrollees, navigators, employers, brokers, and state administrators. | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| SLN11 | 1 | 43 | SLN11 1.42 | RightFax | | The standard fax tool for inbound faxes shall be RightFax from individuals (enrollees, potential enrollees, navigators, employers, and brokers) providing appropriate documentation supporting their health insurance needs, this tool will collect the inbound faxes, integrate with the Enterprise Content Mangaement tool (via SOA adapter) for document storage, and fax procssing workflow. | | |

## SOV Consolidated Non-Functional Requirements Traceability Matrix (RTM)
## Useability

| Base | Level | Sub | Req ID New | Focus | Specifics | Requirement Description | Notes | Evidence |
|---|---|---|---|---|---|---|---|---|
| SLN12 | 1 | 1 | SLN12.1.1 | | | Solutions will adhere to the accessibility standard as outlined in the web guidelines and based on the W3C level 2 accessibility guidelines: (http://www.w3.org/TR/WCAG10/full-checklist.html). | | |
| SLN12 | 1 | 2 | SLN12.1.2 | | | Solutions shall allow the users to easily navigate to a variety of functions available to them without having to move sequentially through excessive menus and screens. | | |
| SLN12 | 1 | 3 | SLN12.1.3 | | | Solutions shall support undo and redo. | | |
| SLN12 | 1 | 4 | SLN12.1.4 | | | Solutions shall provide users with a clearly marked emergency exit for the instances when a user mistakenly chooses a function and such emergency exit must be simple with minimal dialogue. | | |
| SLN12 | 1 | 5 | SLN12.1.5 | | | Solutions shall follow standardized conventions and limit the use of words, situations, or actions that have multiple meanings. | | |
| SLN12 | 1 | 6 | SLN12.1.6 | | | Solutions shall eliminate error-prone conditions or check for them and present users with a confirmation option before they commit to the action. | | |
| SLN12 | 1 | 7 | SLN12.1.7 | | | Solutions shall minimize the user's memory load by making objects, actions, and options visible. | | |
| SLN12 | 1 | 8 | SLN12.1.8 | | | Solutions shall provide the option to have rollover / tooltip help or context messages and provide the option to turn off this option in the user preferences profile. | | |
| SLN12 | 1 | 9 | SLN12.1.9 | | | Solutions shall provide all Solution instructions in a visible or easily retrievable location, when appropriate. | | |
| SLN12 | 1 | 10 | SLN12.1.10 | | | Solutions shall cater to both inexperienced and experienced users and shall provide accelerators to speed up the interaction for the expert user. | | |
| SLN12 | 1 | 11 | SLN12.1.11 | | | Solutions will allow users to create shortcuts for frequent actions. | | |
| SLN12 | 1 | 12 | SLN12.1.12 | | | Solutions shall adhere to all Federal and Vermont accessibility requirements, or their successors: (section 508 of the Rehabilitation Act and detailed in section 1194.22 of the Code of Federal Regulations, Web-based intranet and internet information and applications: | | |
| SLN12 | 1 | 13 | SLN12.1.13 | | | Solutions's error messages shall be expressed in plain language, precisely indicate the problem, and constructively suggest a solution. | | |
| SLN12 | 1 | 14 | SLN12.1.14 | | | Solutions shall use colors to enhance user experience and Solution usability while complying with all disability requirements notated elsewhere in these requirements. | | |
| SLN12 | 1 | 15 | SLN12.1.15 | | | Solutions shall allow the user to navigate to any functional component from a client landing page. | | |
| SLN12 | 1 | 16 | SLN12.1.16 | | | Solutions shall alert the user with information relevant to required next steps. | | |
| SLN12 | 1 | 17 | SLN12.1.17 | | | Solutions shall provide drop down and list boxes for all key entry, and text entry will display existing values for selection (auto fill). | | |
| SLN12 | 1 | 18 | SLN12.1.18 | | | Solutions shall accommodate point and click selection and check box entry for all relevant data entries. | | |
| SLN12 | 1 | 19 | SLN12.1.19 | | | Solutions shall facilitate data entry and shall contain pop-up list boxes for all code fields in all processing windows and allow selection of the entry with use of hot keys. | | |
| SLN12 | 1 | 20 | SLN12.1.20 | | | Solutions shall provide field level on-screen edits with limited user override capabilities. | | |
| SLN12 | 1 | 21 | SLN12.1.21 | | | Solutions shall provide the ability to make fields visible/invisible depending on parameters. | | |
| SLN12 | 1 | 22 | SLN12.1.22 | | | Solutions shall not show fields not accessible to a given user based on access rights, nor shall Solutions show fields not in use. | | |
| SLN12 | 1 | 23 | SLN12.1.23 | | | Solutions shall permit all users (dependent on role-based security and access rights) to have current and up to date information regarding Client's information when connected to solutions given the operational and technical constraints of the data source(s). The data displayed must be time stamped to reflect the currency of the data. | | |
| SLN12 | 1 | 24 | SLN12.1.24 | | | Solutions cursor shall automatically advance to the next logical input field when the maximum allowed numbers of characters have been entered for the keyed field. | | |
| SLN12 | 1 | 25 | SLN12.1.25 | | | Solutions shall provide the option of having a selection from the drop down boxes automatically take the user to the next field. | | |
| SLN12 | 1 | 26 | SLN12.1.26 | | | Solutions shall provide validation checks by methods described within policy, functional, and detailed requirements. | | |
| SLN12 | 1 | 27 | SLN12.1.27 | | | Solutions shall identify invalid entries to the user as immediately as possible. | | |
| SLN12 | 1 | 28 | SLN12.1.28 | | | Solutions shall provide the ability to suggest or automatically change entries that do not conform to data entry standards. | | |
| SLN12 | 1 | 29 | SLN12.1.29 | | | Solutions shall be designed to include only the necessary information and functionality on screens and shall be based on the user's access level and the user's configuration. | | |
| SLN12 | 1 | 30 | SLN12.1.30 | | | Solutions shall be designed to include logical transitions between screens and level of detail during navigation. | | |
| SLN12 | 1 | 31 | SLN12.1.31 | | | Solutions shall provide templates for data entry with identified mandatory and optional data fields. | | |
| SLN12 | 1 | 32 | SLN12.1.32 | | | Solutions shall allow incomplete data sets to be saved for completion of the workflow at a later time. | | |
| SLN12 | 1 | 33 | SLN12.1.33 | | | Solutions shall highlight and flag required and incomplete data fields. | | |

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|---|---|---|---|---|---|---|---|---|
| SLN12 | 1 | 34 | SLN12.1.34 | | | Solutions shall provide a user interface that shall be simple and consistent throughout all areas and functions of Solutions. | | |
| SLN12 | 1 | 35 | SLN12.1.35 | | | Solutions shall include a graduated Solution of alert levels to allow users to determine urgency and relevancy. | | |
| SLN12 | 1 | 36 | SLN12.1.36 | | | Solutions shall allow configuration of alerts by a user, for a user by a supervisor, and for a user by a Solution administrator | | |
| SLN12 | 1 | 37 | SLN12.1.37 | | | Solutions shall allow for the request of or entry of data from external devices (e.g. tablets, kiosks, barcode scanner, RFID scanner, speech). | | |
| SLN12 | 1 | 38 | SLN12.1.38 | | | Solutions shall notify the user when a source Solution is unavailable / inoperable and notify user that any available information about the subject being viewed is as of certain time and date. | | |
| SLN12 | 1 | 39 | SLN12.1.39 | | | Solutions's web interface shall be Web 2.0 compliant | | |
| SLN12 | 1 | 40 | SLN12.1.40 | | | Solutions shall not require users to reenter data due to validation errors | | |
| SLN12 | 1 | 41 | SLN12.1.41 | | | Solutions shall enable central workflow alerts and transactional status. Solutions shall centralize pending work items for the user as in a work queue | | |
| SLN12 | 1 | 42 | SLN12.1.42 | | | Solutions shall support multi-language ***Open action item to identify which languages and whether right to left functionality is required to be supported | | |
| SLN12 | 1 | 43 | SLN12.1.43 | | | Solutions shall have the capability to push messages to the intended workers without requiring them to specifically inquire for the data. | | |
| SLN12 | 1 | 44 | SLN12.1.44 | | | Solutions shall provide a hover option over state defined fields to generate a description of the data element. | | |
| SLN12 | 1 | 45 | SLN12.1.45 | | | Solutions shall minimize the number of mouse clicks / user interaction to complete any action. | | |
| SLN12 | 1 | 46 | SLN12.1.46 | | | Solutions shall provide auto completion functionality for user defined fields. | | |
| SLN12 | 1 | 47 | SLN12.1.47 | | | Solutions shall provide linked access to help functions which contain the appropriate information and search of all help information from every window, based on user profiles. | | |
| SLN12 | 1 | 48 | SLN12.1.48 | | | Solutions shall use a Graphical User Interface (GUI) to help the user navigate to the next logical step in the workflow, or freely navigate to other parts of Solutions's functionality, and then allow the user to return to complete the in-process task. | | |
| SLN12 | 1 | 49 | SLN12.1.49 | | | Solutions shall preserve context by limiting abrupt transitions and redisplays in order to maximize and enhance the user experience and solution usability. | | |
| SLN12 | 1 | 50 | SLN12.1.50 | | | Solutions shall speak the users' language, with words, phrases and concepts familiar to the user, rather than solution-oriented terms. | | |
| SLN12 | 1 | 51 | SLN12.1.51 | | | Solutions shall follow real-world Vermont conventions, making information appear in a natural and logical order. | | |
| SLN12 | 1 | 52 | SLN12.1.52 | Customer Service | | Creating and maintaining consumer assistance tools, including a website through which enrollees and prospective enrollees of qualified health benefit plans may obtain standardized comparative information on such plans, a toll-free telephone hotline to respond to requests for assistance, and interactive online communication tools, in a manner that complies with the Americans with Disabilities Act. | | |
| SLN12 | 1 | 53 | SLN12.1.53 | Customer Service - Admin Tasks | | Solutions shall Include graphics capability for notifications | | |
| SLN12 | 1 | 54 | SLN12.1.54 | Customer Service | | Information must be provided to applicants and enrollees in plain language and in a manner that is accessible and timely to—<br>(1) Individuals living with disabilities including accessible Web sites and the provision of auxiliary aids and services at no cost to the individual in accordance with the Americans with Disabilities Act and section 504 & 508 of the Rehabilitation Act.<br>(2) Individuals who are limited English proficient through the provision of language services at no cost to the individual, including<br>(i) Oral interpretation;<br>(ii) Written translations; and<br>(iii) Taglines in non-English languages indicating the availability of language services. | | |
| SLN12 | 1 | 55 | SLN12.1.55 | Financial Management | | The Financial system shall incorporate features designed to reduce the amount of direct keying required to initiate transaction processing, such as the following: the use of default values, look-up tables, automatic data recall, single-function windows (e.g., one input screen per transaction), the ability to pass common data from screen to screen, highlighting of required fields, auto tabs, the ability to retrieve suspended transactions by user-type, document, account, and transaction entry undo/redo. | | |
| SLN12 | 1 | 56 | SLN12.1.56 | General | | The Financial system shall incorporate graphical user interface characteristics, such as the following: mouse-activated icons, buttons, scroll bars, drop-down lists, check boxes, menu bars, text boxes, tool tips, resizable windows, and cut, copy, and paste functions and undo/redo functionality. | | |
| SLN12 | 1 | 57 | SLN12.1.57 | General | | The Solution shall allow a search based on one single criteria or multiple search criteria | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| SLN12 | 1 | 58 | SLN12.1.58 | Customer Service - Call Center | | The system shall provide speech and hearing impaired customers with the ability to communicate through a Teletypewriter (TTY) or Telecommunications Display Device (TDD). | | |

## EA Application Architecture

Health Benefits Exchange Software Requirements

| Product | Useage | Vermont ULA | CGI Validation |
|---|---|---|---|
| | | | |
| Siebel CRM Base | | X | Yes (as defined by Oracle) |
| Siebel Public Sector CRM Base Option | | X | Yes (as defined by Oracle) |
| Siebel Tools | | X | Yes (as defined by Oracle) |
| Siebel Public Sector Partner Portal | | X | Yes (as defined by Oracle) |
| Siebel Partner Portal | | X | Yes (as defined by Oracle) |
| Siebel Public Sector eService | | X | Yes (as defined by Oracle) |
| Siebel Financial Services CRM Base Option | | X | Yes (as defined by Oracle) |
| Siebel CTI | | X | Yes (as defined by Oracle) |
| Siebel Data Quality | | X | Yes (as defined by Oracle) |
| Siebel Smart Answer Connector | | X | Yes (as defined by Oracle) |
| Siebel Smart Answer for Service | | X | Yes (as defined by Oracle) |
| Siebel Email Response | | X | Yes (as defined by Oracle) |
| Siebel HelpDesk Option | | X | Yes (as defined by Oracle) |
| Siebel Group Policies | | X | Yes (as defined by Oracle) |
| Siebel Individual Coverage | | X | Yes (as defined by Oracle) |
| Siebel CRM Web Channel for Customers - up to 15 Objects | | X | Yes (as defined by Oracle) |
| Siebel Test Automation Interfaces | | X | Yes (as defined by Oracle) |
| Siebel Remote Client | | X | Yes (as defined by Oracle) |
| Siebel Field Service | | X | Yes (as defined by Oracle) |
| Oracle Real-time Scheduler | | X | Yes (as defined by Oracle) |
| Siebel Email/Web Offer Designer | | X | Yes (as defined by Oracle) |
| Siebel Email Marketing Server | | X | Yes (as defined by Oracle) |
| Siebel Campaign Management | | X | Yes (as defined by Oracle) |
| Siebel Web Marketing | | X | Yes (as defined by Oracle) |
| Siebel Marketing Server | | X | Yes (as defined by Oracle) |
| | | | |
| | | | |
| **Product** | | **Vermont ULA** | |
| ***MDM and Oracle Enterprise Data Quality (EDQ) - to replace Vermont's current investment in Informatica Data Quality quantity based*** | | | |
| Oracle Customer Hub Data Steward | | X | Yes (as defined by Oracle) |
| Oracle Customer Hub B2B | | X | Yes (as defined by Oracle) |
| Oracle Customer Hub B2C | | X | Yes (as defined by Oracle) |
| Oracle Activity Hub B2B for Oracle Customer Hub B2B | | X | Yes (as defined by Oracle) |
| Oracle Activity Hub B2C for Oracle Customer Hub B2C | | X | Yes (as defined by Oracle) |
| Oracle Enterprise Data Quality Match and Merge | | X | Yes (as defined by Oracle) |
| Oracle Enterprise Data Quality Parsing and Standardization | | X | Yes (as defined by Oracle) |
| Oracle Enterprise Data Quality Profile and Audit | | X | Yes (as defined by Oracle) |
| Oracle Data Quality Address Validation Server | | X | Yes (as defined by Oracle) |
| | | | |
| | | | |
| **Product** | | **Vermont ULA** | |
| ***Oracle Policy Automation*** | | | |
| Oracle Policy Modeling | | X | Yes (as defined by Oracle) |
| Oracle Policy Automation | | X | Yes (as defined by Oracle) |
| Oracle Policy Automation Connector for Siebel | | X | Yes (as defined by Oracle) |
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|---|---|---|---|
| ***User Productivity Kit (UPK)*** | | ***Vermont ULA*** | |
| UPK Enterprise User | | X | Yes (as defined by Oracle) |
| UPK Developer | | X | Yes (as defined by Oracle) |
| | | | |
| | | | |
| ***Product*** | | ***Vermont ULA*** | |
| ***Application Integration Architecture (AIA)*** | | | |
| Oracle Customer Master Data Management Integration Base Pack | | X | Yes (as defined by Oracle) |
| Oracle Application Integration Architecture Foundation Pack | | X | Yes (as defined by Oracle) |
| Oracle Customer Master Data Management Integration Option for Siebel CRM | | X | Yes (as defined by Oracle) |
| Siebel Field Service Integration to Oracle Real-Time Scheduler | | X | Yes (as defined by Oracle) |
| | | | |
| | | | |
| ***Product*** | | ***Vermont ULA*** | |
| ***Oracle Business Intelligence Enterprise Edition (OBIEE) and Siebel BI Analytics*** | | | |
| Business Intelligence Publisher | | X | Yes (as defined by Oracle) |
| Oracle Business Intelligence Suite Enterprise Edition Plus | | X | Yes (as defined by Oracle) |
| Informatica PowerCenter and Power Connect Adapters | | X | Yes (as defined by Oracle) |
| Business Intelligence Management Pack | | X | Yes (as defined by Oracle) |
| Contact Center Telephony Analytics | | X | Yes (as defined by Oracle) |
| Service Analytics | | X | Yes (as defined by Oracle) |
| Partner Analytics | | X | Yes (as defined by Oracle) |
| Case Management Analytics | | X | Yes (as defined by Oracle) |
| | | | |
| | | | |
| ***Product*** | | ***Vermont ULA*** | |
| ***Oracle Database*** | | | |
| Oracle Database Enterprise Edition | | X | Yes (as defined by Oracle) |
| Real Application Clusters | | X | Yes (as defined by Oracle) |
| Advanced Security | | X | Yes (as defined by Oracle) |
| Oracle Active Data Guard | | X | Yes (as defined by Oracle) |
| Diagnostics Pack | | X | Yes (as defined by Oracle) |
| Tuning Pack | | X | Yes (as defined by Oracle) |
| Change Management Pack (now called database lifecycle management pack( | | X | Yes (as defined by Oracle) |
| Provisioning and Patch Automation Pack for Database | | X | Yes (as defined by Oracle) |
| Configuration Management Pack for Oracle Database | | X | Yes (as defined by Oracle) |
| Oracle Data Masking Pack | | X | Yes (as defined by Oracle) |
| Database Vault | | X | Yes (as defined by Oracle) |
| Secure Enterprise Search | | X | Yes (as defined by Oracle) |
| Secure Enterprise Search Connector - Siebel | | X | Yes (as defined by Oracle) |
| | | | |
| | | | |
| ***Product*** | | ***Vermont ULA*** | |
| ***Oracle Fusion Middleware/SOA*** | | | |
| Oracle Application Management Suite for Siebel | | X | Yes (as defined by Oracle) |
| WebLogic Suite | | X | Yes (as defined by Oracle) |
| SOA Management Pack Enterprise Edition | | X | Yes (as defined by Oracle) |
| WebLogic Server Management Pack Enterprise Edition | | X | Yes (as defined by Oracle) |
| SOA Suite for Oracle Middleware | | X | Yes (as defined by Oracle) |
| Unified Business Process Management Suite | | X | Yes (as defined by Oracle) |
| Audit Vault Server | | X | Yes (as defined by Oracle) |
| Audit Vault Collection Agent | | X | Yes (as defined by Oracle) |
| Management Pack for WebCenter Suite | | X | Yes (as defined by Oracle) |
| WebCenter Suite | | X | Yes (as defined by Oracle) |
| Enterprise Repository | | X | Yes (as defined by Oracle) |

| | | | |
|---|---|---|---|
| Service Registry | | X | Yes (as defined by Oracle) |
| Healthcare Adapter | | X | Yes (as defined by Oracle) |
| Oracle WebCenter Suite Plus – this is an "upgrade" to the State's current investment of WebCenter. Suite Plus includes Document Management, Web Content Management (WCM), Digital Asset Management (DAM), Records Management, WebCenter Content Conversion, Java SE, and WebCenter Imaging. *(NOTE: CGI bid the component functionality for document/content management including: WebCenter Imaging, WebCenter Content, and WebCenter Adapter for Siebel)* | | X | Yes (as defined by Oracle) |
| WebCenter Applications Adapter for Siebel | | X | Yes (as defined by Oracle) |
| WebCenter Adapter for Micrcosoft | | X | Yes (as defined by Oracle) |
| Oracle Data Integrator Enterprise Edition | | ??? | Yes (as defined by Oracle) |
| Informatica Power Center (ETL Engine) | | X | Yes (as defined by Oracle) |
| | | | |
| | | | |
| ***Product*** | | ***Vermont ULA*** | |
| ***Oracle Identity and Access Management*** | | | |
| Identity Analytics | | X | Yes (as defined by Oracle) |
| Identity and Access Management Suite Plus | | X | Yes (as defined by Oracle) |
| Identity Manager Connector - Database Applications Table | | X | Yes (as defined by Oracle) |
| Identity Manager Connector - Database User Management | | X | Yes (as defined by Oracle) |
| Identity Manager Connector - Microsoft Active Directory | | X | Yes (as defined by Oracle) |
| Identity Manager Connector - Microsoft Exchange | | X | Yes (as defined by Oracle) |
| Identity Manager Connector - PeopleSoft Enterprise Applications | | X | Yes (as defined by Oracle) |
| Identity Manager Connector - Microsoft Windows | | X | Yes (as defined by Oracle) |
| Identity Manager Connector - UNIX | | X | Yes (as defined by Oracle) |
| Identity Manager Connector - RSA Authentication Manager | | X | Yes (as defined by Oracle) |
| Identity Manager Connector - Siebel Enterprise Applications | | X | Yes (as defined by Oracle) |
| Identity Manager Connector - IBM RACF | | X | Yes (as defined by Oracle) |
| Management Pack Plus for Identity Management | | X | Yes (as defined by Oracle) |
| | | | |
| ***Product*** | | ***CGI Purchases on behalf of Vermont*** | |
| ***CGI Purchased on behalf of State of Vermont*** | | | |
| OneGate | | X | Yes |
| LifeRay | | X | Yes |
| Thunderhead | | X | Yes |
| RightFax | | X | Yes |
| | | | |

Production Access View

| SOV HBE Roles | | Public | | | | State Private Network | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Public Web DMZ | | | | Private Web WAN | | | | | Private Web WAN Mgmt | | | Siebel Product Suite | | | One Gate | ECM | | MDM | OPA | | IdM | | | Business Intelligence | | | | ESB | Admin | | | Database | | |
| No. | Role | Liferay | OIM | ESB | FTP | Siebel | BI | IdM | ECM | Liferay Portal | MDM | ESB-WSMAN | ESB-WSINT | AOM | Gateway etc. | Report | OneGate | WCC | Thunderhead | MDM | App | OPM | OIM App | OAM App | DIR App | OBI Pres | Server/Scheduler | ETL | FTP | ESB, OSR, OER | Siebel App Mgmt | Siebel Admin Console | DAC Client | OLTP | OLAP | IdM |
| 1 | Individual | x | x | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | Employee | x | x | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | Employer | x | x | | x | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | Navigator | x | x | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | Assisters (in person and remote) | x | x | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | Broker | x | x | | x | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | Issuers | x | x | x | x | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | Premium Processor | | | x | x | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | Health Connectors | x | x | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | Health Guides | x | x | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | Other (VHC Peers, VHC Whisperers) | x | x | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | SOV HBE Staff | | | | | x | x | x | x | x | | | | | | | | x | | | | x | | | | x | | | | | | | | | | | |
| 13 | Maximus (outsourced Call Center CSR agents) | x | x | | | x | x | | x | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 14 | Plan Administrator | | | | | x | x | x | x | | | | | | | | | x | | | | x | | | | x | | | | | | | | | | | |
| 15 | Enrollment Administrator | | | | | x | x | x | x | x | | | | | | | | x | | | | x | | | | x | | | | | | | | | | | |
| 16 | Overall Website Administrator | x | x | | | x | x | x | x | x | | | | | | | | x | | | | x | | | | x | | | | | | | | | | | |
| 17 | ESD (Economic Service District Office) Non Healthcare Question Staff Worker | | | | | x | x | x | x | | | | | | | | | x | | | | x | | | | x | | | | | | | | | | | |
| 18 | DVHA L2 Resolver | | | | | x | x | x | x | | | | | | | | | x | | | | x | | | | x | | | | | | | | | | | |
| 19 | HAEU (Health Access Eligibility Unit) Staff Worker | | | | | x | x | x | x | | | | | | | | | x | | | | x | | | | x | | | | | | | | | | | |
| 20 | State Health Care BPS (Benefits Program Specialist) | | | | | x | x | x | x | | | | | | | | | x | | | | x | | | | x | | | | | | | | | | | |
| 21 | Eligibility Workers in the 12 ESD District Offices | | | | | x | x | x | x | | | | | | | | | x | | | | x | | | | x | | | | | | | | | | | |
| 22 | DCF (Department of Children and Families) Staff Worker | | | | | x | x | x | x | | | | | | | | | x | | | | x | | | | x | | | | | | | | | | | |
| 23 | Legal Aid Worker | | | | | x | x | x | x | | | | | | | | | x | | | | x | | | | x | | | | | | | | | | | |
| 24 | 211 Worker | | | | | x | x | x | x | | | | | | | | | x | | | | x | | | | x | | | | | | | | | | | |
| 25 | DFR (Department of Financial Regulations) Staff Worker | | | | | x | x | x | x | | | | | | | | | x | | | | x | | | | x | | | | | | | | | | | |
| 26 | Ombudsman | x | x | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 27 | Anonymous | x | x | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 28 | Project / Developer Team | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 29 | IT Operational Support (CGI & State) | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |

## SOV Consolidated Non-Functional Requirements Traceability Matrix (RTM)
## SLN15 ACCESS Remediation SOW

| Base | Level | Sub | Req ID New | Focus | Specifics | Requirement Description | Notes | Evidence |
|---|---|---|---|---|---|---|---|---|
| SLN15 | 1 | 1 | SLN15.1.1 | Interoperability / Interfaces Requirements | A2.6 | The Solution shall have the capability to notify the System administrators/system support staff if an interface is not available for any particular reason. The notification and issue(s) shall be invisible to the applicant/beneficiary/client. | | |
| SLN15 | 1 | 2 | SLN15.1.2 | Interoperability / Interfaces Requirements | A2.8 | The Solution shall implement, at a minimum, interfaces (both real-time or batch) with the applications and data sources listed in "Interface List - ACCESS" document included in the procurement library. | | |
| SLN15 | 1 | 3 | SLN15.1.3 | Enterprise Service Bus (ESB) Requirements | P1.15 | The Solution must provide for any combination of Alert Destinations such as Email, JMS, SNMP, reporting services, and server logs. The alerts shall be customizable with respect to the frequency of the alert, the ability to enable/disable an alert, rule expiration dates, starting and ending times for an alert, and customizable conditions for an alert". | | |
| SLN15 | 1 | 4 | SLN15.1.4 | Enterprise Service Bus (ESB) Requirements | P1.21 | The Solution shall support Transport Security, Message Security, WS-Security, SAML architecture, and WS-Policy. In addition, the Solution shall also implement the ability to externalize security by using a third-party security infrastructure whereby the ESB's proxy action calls a third-party for user/role information. | | |
| SLN15 | 1 | 5 | SLN15.1.5 | Enterprise Service Bus (ESB) Requirements | P1.29 | The State of Vermont has invested in the Oracle "stack" and has a strong preference to use this investment to provide the basis of the technology architecture. The State of Vermont is planning to standardize on these products going forward.<br><br>The State of Vermont and AHS have a strong preference to use Oracle Fusion Middleware (OFM) to provide the SOA infrastructure required for the. The State will consider Solutions using alternative products only where there is a compelling argument to do so provided by the vendor. | | |
| SLN15 | 1 | 6 | SLN15.1.6 | Enterprise Service Bus (ESB) Requirements | P1.30 | The Solution must incorporate the ability to undo changes, detect and resolve conflicts, test service connectivity with tracing information, easily enable/disable services, provide logging and view all session activities/change history attributable to each logged in user. | | |
| SLN15 | 1 | 7 | SLN15.1.7 | Data Integration - ETL Requirements | P2.11 | The State of Vermont has invested in the Oracle "stack" and has a strong preference to use this investment to provide the basis of the technology architecture. The State of Vermont is planning to standardize on these products going forward.<br><br>The State of Vermont and AHS have a strong preference to use Oracle Data Integration (ODI) and Oracle Warehouse Builder (OWB). The State will consider Solutions using alternative products only where there is a compelling argument to do so provided by the vendor. | | |
| SLN15 | 1 | 8 | SLN15.1.8 | Master Data Management Requirements | P3.3 | The Solution shall enable the delivery of a single client and a single provider view for all stakeholders. | | |
| SLN15 | 1 | 9 | SLN15.1.9 | Master Data Management Requirements | P3.15 | Where data is matched by a proxy rather than the actual identifier (e.g. client or provider ID) the Solution shall load data no less quickly, efficiently or accurately. | | |
| SLN15 | 1 | 10 | SLN15.1.10 | Master Data Management Requirements | P3.17 | The Solution shall provide tools to validate and manage all client and provider addresses to include all address types (mailing, residential, E-911). | | |
| SLN15 | 1 | 11 | SLN15.1.11 | Master Data Management Requirements | P3.26 | The Solution shall integrate with the State Active Directory to provide authorization, e.g., role-based security. | | |
| SLN15 | 1 | 12 | SLN15.1.12 | Master Data Management Requirements | P3.35 | The State of Vermont has invested in the Oracle "stack" and has a strong preference to use this investment to provide the basis of the Solution technology architecture. The State of Vermont is planning to standardize on these products going forward.<br><br>The State of Vermont and AHS expect to implement MDM using a combination of both centralized and registry style implementations and will require strong interactive probabilistic matching capabilities. The State of Vermont has invested in enterprise licenses for Siebel UCM and has created a shortlist of preferred MDM products including Siebel UCM and IBM InfoSphere Standard. The State will consider Solutions using alternative products only where there is a compelling argument to do so provided by the vendor. | | |
| SLN15 | 1 | 13 | SLN15.1.13 | Security Requirements | P4.1 | The Solution shall comply with U.S. Department of Health & Human Services and U.S. Department of Education privacy and data security requirements, including, but not limited to, the Health Insurance Portability and Accountability Act (HIPAA), the Family Educational Rights and Privacy Act (FERPA) and the Health Information Technology for Economic and Clinical Health (HITECH) Act provisions of the American Recovery and Reinvestment Act (ARRA) of 2009. | | |
| SLN15 | 1 | 14 | SLN15.1.14 | Security Requirements | P4.3 | The Solution shall implement security controls in accordance with all Federal and State security policy and regulations. | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| SLN15 | 1 | 15 | SLN15.1.15 | Security Requirements | P4.4 | The Solution shall meet:<br><br>- Guidance from CMS including MITA Framework 2.0 and Harmonized Security and Privacy Framework | | |
| SLN15 | 1 | 16 | SLN15.1.16 | Security Requirements | P4.5 | The vendor shall adhere to the principle of "Fail Safe" to ensure that a system in a failed state does not reveal any sensitive information or leave any access controls open for attacks | | |
| SLN15 | 1 | 17 | SLN15.1.17 | Security Requirements | P4.6 | The Solution shall allow for controlled access to participant records. Users will be able to view participant data within the Solution at the State-defined levels of access based on user security privileges. | | |
| SLN15 | 1 | 18 | SLN15.1.18 | Security Requirements | P4.7 | The Solution shall provide for security concepts covering the following components: Virtual Private Network (VPN), firewall technology and Demilitarized Zone (DMZ), virus-/intrusion detection, mail/content filtering avoiding fault positives, encryption, Public Key Infrastructure (PKI). | | |
| SLN15 | 1 | 19 | SLN15.1.19 | Security Requirements | P4.8 | The Solution shall maintain a level of security that is commensurate with the risk and magnitude of the harm that could result from the loss, misuse, disclosure, or modification of information. | | |
| SLN15 | 1 | 20 | SLN15.1.20 | Security Requirements | P4.9 | Information security shall be built into the Solution from its inception rather than "bolted on" after the Solution Solution has been implemented. | | |
| SLN15 | 1 | 21 | SLN15.1.21 | Security Requirements | P4.10 | The Solution shall support security at the object level (e.g. Table, View, Index). | | |
| SLN15 | 1 | 22 | SLN15.1.22 | Security Requirements | P4.11 | The Solution shall support security at the row and column level. | | |
| SLN15 | 1 | 23 | SLN15.1.23 | Security Requirements | P4.12 | The Solution shall support auditing at the object level (i.e. Table, Column). | | |
| SLN15 | 1 | 24 | SLN15.1.24 | Security Requirements | P4.13 | The Solution shall provide the ability for concurrent users to simultaneously view the same record, documentation and/or template. | | |
| SLN15 | 1 | 25 | SLN15.1.25 | Security Requirements | P4.14 | The Solution shall provide protection to maintain the integrity of data during concurrent access. | | |
| SLN15 | 1 | 26 | SLN15.1.26 | Security Requirements | P4.15 | The software used to install and update the system, independent of the mode or method of conveyance, shall be certified free of malevolent software ("malware"). Vendor may self-certify compliance with this standard through procedures that make use of commercial malware scanning software. | | |
| SLN15 | 1 | 27 | SLN15.1.27 | Security Requirements | P4.16 | The Solution shall be configurable to prevent corruption or loss of data already accepted into the Solution in the event of a Solution failure (e.g. integrating with a UPS, etc.). | | |
| SLN15 | 1 | 28 | SLN15.1.28 | Security Requirements | P4.17 | The Solution shall support protection of confidentiality of all Protected Health Information (PHI) delivered over the Internet or other known open networks via encryption using triple-DES (3DES) or the Advanced Encryption Standard (AES) and an open protocol such as Transport Layer Security (TLS), Secure Sockets Layer (SSL), Internet Protocol Security (IPsec), XML encryptions, or Secure/Multipurpose Internet Mail Extensions(S/MIME) or their successors | | |
| SLN15 | 1 | 29 | SLN15.1.29 | Security Requirements | P4.18 | The system, when storing PHI on any device intended to be portable/removable (e.g. smartphones, portable computers, portable storage devices), shall support use of a standards based encrypted format using 3DES, AES or their successors. | | |
| SLN15 | 1 | 30 | SLN15.1.30 | Security Requirements | P4.20 | The Solution shall support a form of user authentication. | | |
| SLN15 | 1 | 31 | SLN15.1.31 | Security Requirements | P4.23 | The Solution shall provide the capability to prevent database administrators from seeing the data in databases they maintain. | | |
| SLN15 | 1 | 32 | SLN15.1.32 | Security Requirements | P4.24 | The Solution shall support grouping users by functional departments or other organization to simplify security maintenance. | | |
| SLN15 | 1 | 33 | SLN15.1.33 | Security Requirements | P4.25 | The Solution shall provide the ability to capture and maintain identifiers required for licensed clinicians to support their practice. | | |
| SLN15 | 1 | 34 | SLN15.1.34 | Security Requirements | P4.26 | The Solution shall provide the ability to maintain a directory of all personnel who currently use or access the system/IVR/SQL database. | | |
| SLN15 | 1 | 35 | SLN15.1.35 | Security Requirements | P4.27 | The Solution shall provide the ability to create and maintain a directory of external providers to facilitate communication and information exchange. | | |
| SLN15 | 1 | 36 | SLN15.1.36 | Security Requirements | P4.28 | The Solution shall provide the ability to identify certain information as confidential (e.g. PII, PHI, etc.) and only make that accessible by appropriately authorized users. | | |
| SLN15 | 1 | 37 | SLN15.1.37 | Security Requirements | P4.29 | The Solution shall restrict access to summarized information according to organizational policy, scope of practice, and jurisdictional law. | | |
| SLN15 | 1 | 38 | SLN15.1.38 | Security Requirements | P4.30 | The Solution must be able to associate permissions with a user using one or more of the following access controls:<br>1) user-based (access rights assigned to each user)<br>2) Role-Based Access Controls (RBAC; users are grouped by role and access rights assigned to these groups)<br>3) context-based (role-based with additional access rights assigned or restricted based on the context of the transaction such as time-of-day, workstation-location, emergency-mode, etc.) | | |

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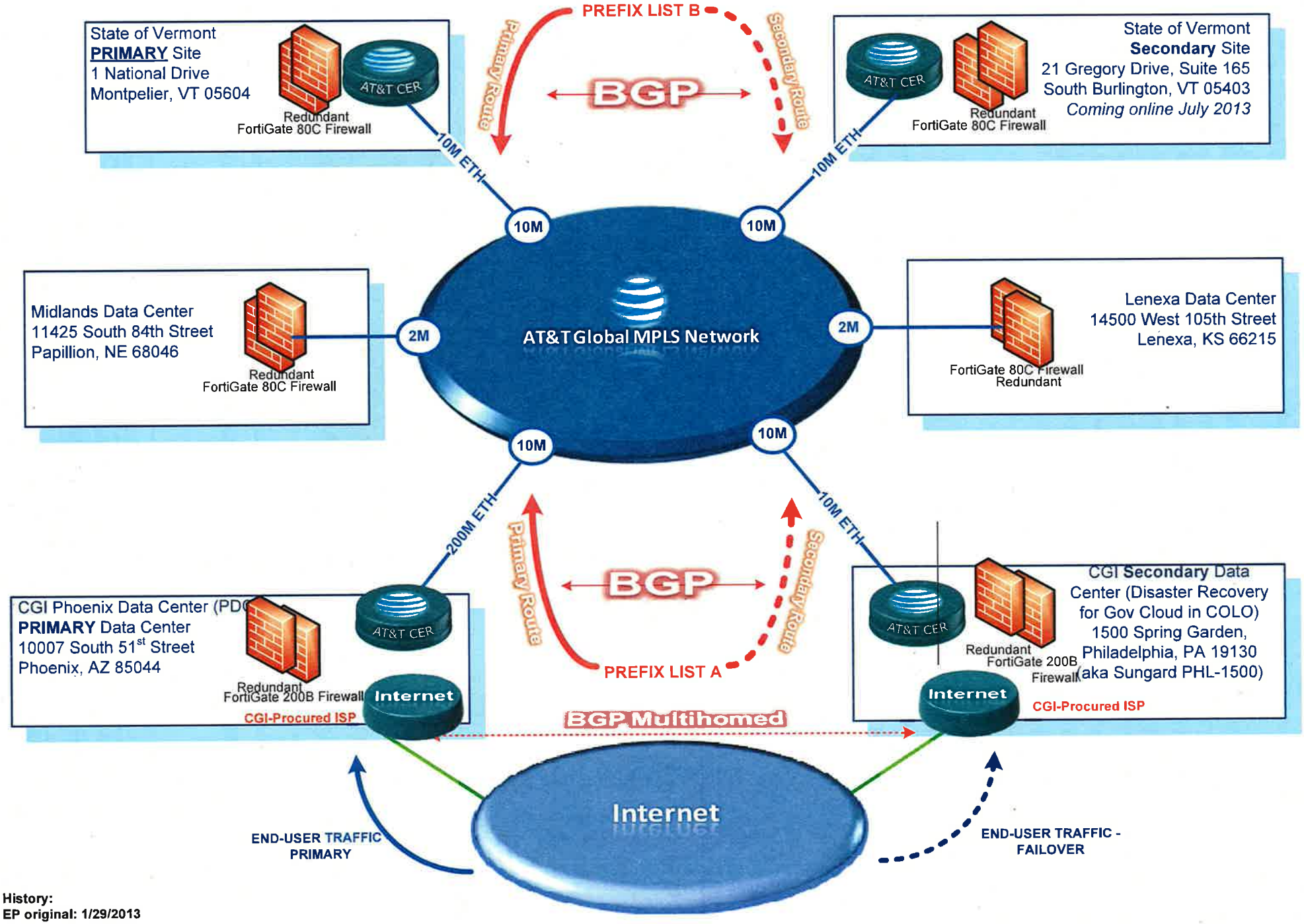
|---|---|---|---|---|---|---|---|---|
| SLN15 | 1 | 39 | SLN15.1.39 | Security Requirements | P4.31 | The Solution shall provide the ability to prevent specified user(s) or groups from accessing confidential information such as a patient's chart. | | |
| SLN15 | 1 | 40 | SLN15.1.40 | Security Requirements | P4.32 | The Solution shall provide the ability to limit access to certain confidential information such as a patient's chart to providers directly involved in service of the patient, or providers involved in review of the service. | | |
| SLN15 | 1 | 41 | SLN15.1.41 | Security Requirements | P4.33 | When access to a user's account is restricted, the Solution shall provide a means for appropriately authorized users to "break the glass" and obtain access for emergency situations, as defined by Vermont policy. | | |
| SLN15 | 1 | 42 | SLN15.1.42 | Security Requirements | P4.34 | When access to a chart is restricted and the "break the glass" has occurred, the Solution shall provide the ability to notify specified users and provide an audit trail for this access. | | |
| SLN15 | 1 | 43 | SLN15.1.43 | Security Requirements | P4.35 | The Solution shall enforce the most restrictive set of rights/privileges or accesses needed by users/groups or processes acting on behalf of users, for the performance of specified tasks. | | |
| SLN15 | 1 | 44 | SLN15.1.44 | Security Requirements | P4.36 | The Solution shall provide the ability for authorized administrators to assign restrictions or privileges to users/groups. | | |
| SLN15 | 1 | 45 | SLN15.1.45 | Security Requirements | P4.37 | The Solution shall support removal of a user's privileges without deleting the user from the Solution to ensure history of user's identity and actions. | | |
| SLN15 | 1 | 46 | SLN15.1.46 | Security Requirements | P4.38 | The Solution shall be able to support RBAC in compliance with the HL7 Permissions Catalog. | | |
| SLN15 | 1 | 47 | SLN15.1.47 | Security Requirements | P4.39 | The Solution shall be capable of operating within an RBAC infrastructure conforming to ANSI INCITS 359-2004, American National Standard for Information Technology – Role Based Access Control. | | |
| SLN15 | 1 | 48 | SLN15.1.48 | Security Requirements | P4.40 | The Solution shall provide more-advanced session management abilities such as prevention of duplicate logins, remote logout and location-specific session timeouts. | | |
| SLN15 | 1 | 49 | SLN15.1.49 | Security Requirements | P4.41 | The Solution shall provide the ability to perform Solution administration functions such as reference table maintenance and adding / removing users from the system. | | |
| SLN15 | 1 | 50 | SLN15.1.50 | Security Requirements | P4.42 | The Solution shall allow users access based on their roles irrespective of their geographical location. | | |
| SLN15 | 1 | 51 | SLN15.1.51 | Security Requirements | P4.43 | The Solution shall provide the capability to integrate with existing authentication and authorization mechanisms (RACF on the mainframe). | | |
| SLN15 | 1 | 52 | SLN15.1.52 | Security Requirements | P4.44 | The Solution shall provide the capability to create temporary and emergency accounts and terminate those accounts automatically after a user defined period of time. | | |
| SLN15 | 1 | 53 | SLN15.1.53 | Security Requirements | P4.45 | The Solution shall provide the capability to override a role and restrict access to information by users or groups of users. | | |
| SLN15 | 1 | 54 | SLN15.1.54 | Security Requirements | P4.46 | The Solution shall allow an individual with active eligibility under a different user id to reapply under their own user id. | | |
| SLN15 | 1 | 55 | SLN15.1.55 | Security Requirements | P4.47 | The Solution shall provide the capability to monitor events on the information system, detect attacks, and provide identification of unauthorized use of the system. | | |
| SLN15 | 1 | 56 | SLN15.1.56 | Security Requirements | P4.48 | The Solution shall provide the capability to identify and report on inappropriate access to information in the system, based on user defined criteria. | | |
| SLN15 | 1 | 57 | SLN15.1.57 | Security Requirements | P4.49 | The State of Vermont has invested in the Oracle "stack" and has a strong preference to use this investment to provide the basis of the Solution technology architecture. The State of Vermont is planning to standardize on these products going forward.<br><br>The State of Vermont and AHS have a strong preference to use Oracle Identity Manager (OIM) to provide the security management required for the Solution. The State will consider Solutions using alternative products only where there is a compelling argument to do so provided by the vendor. | | |
| SLN15 | 1 | 58 | SLN15.1.58 | Identity Management Requirements | P15.1 | The Solution shall support single sign-on capability for all users. | | |
| SLN15 | 1 | 59 | SLN15.1.59 | Identity Management Requirements | P15.2 | The Solution shall provide APIs/Connectors to integrate with a variety of 3rd party/custom applications to provide single sign-on. | | |
| SLN15 | 1 | 60 | SLN15.1.60 | Identity Management Requirements | P15.3 | The Solution shall enforce a limit of (configurable) consecutive invalid access attempts by a user. The Solution shall protect against further, possibly malicious, user authentication attempts using an appropriate mechanism (e.g. locks the account/node until released by an administrator, locks the account/node for a configurable time period, or delays the next login prompt according to a configurable delay algorithm). | | |
| SLN15 | 1 | 61 | SLN15.1.61 | Identity Management Requirements | P15.4 | When passwords are used, the Solution shall provide an administrative function that resets passwords. | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| SLN15 | 1 | 62 | SLN15.1.62 | Identity Management Requirements | P15.5 | When passwords are used, the Solution shall not display passwords while being entered. | | |
| SLN15 | 1 | 63 | SLN15.1.63 | Identity Management Requirements | P15.6 | The Solution shall provide only limited feedback information to the user during the authentication. | | |
| SLN15 | 1 | 64 | SLN15.1.64 | Identity Management Requirements | P15.7 | The Solution shall support case-insensitive usernames that contain typeable alpha-numeric characters in support of ISO-646/ECMA-6 (aka US ASCII). | | |
| SLN15 | 1 | 65 | SLN15.1.65 | Identity Management Requirements | P15.8 | When passwords are used, the Solution shall allow an authenticated user to change their password, automatically when possible, consistent with password strength rules. | | |
| SLN15 | 1 | 66 | SLN15.1.66 | Identity Management Requirements | P15.10 | When passwords are used, the Solution shall support case-sensitive passwords that contain typeable alpha-numeric characters in support of ISO-646/ECMA-6 (aka US ASCII). | | |
| SLN15 | 1 | 67 | SLN15.1.67 | Identity Management Requirements | P15.11 | When passwords are used, the Solution shall use either standards-based encryption, e.g., 3DES, AES, or standards-based hashing, e.g., SHA1 to store or transport passwords. | | |
| SLN15 | 1 | 68 | SLN15.1.68 | Identity Management Requirements | P15.13 | The Solution shall meet:<br>NIST 800-63 guidance, CMS<br>E-Authentication Assurance Levels – From CMS<br>Level 1: Single factor authentication, Identity proofing relies on subscriber's own assertions<br>Level 2: Single factor authentication, requires verifying the individual's financial account information, and other information<br>Level 3: Multifactor authentication, requires verifying the individual's financial account information, and other information<br>Level 4: Multifactor authentication, In-person proofing is required<br>Tokens (typically a cryptographic key or password) for proving identity,<br>Identity proofing, registration and the delivery of credentials which bind an identity to a token,<br>Remote authentication mechanisms, that is the combination of credentials, tokens and authentication protocols used to establish that a claimant is in fact the subscriber he or she claims to be<br>Assertion mechanisms used to communicate the results of a remote authentication to other parties. | | |
| SLN15 | 1 | 69 | SLN15.1.69 | Identity Management Requirements | P15.14 | The Solution shall re-authenticate the user before any access to Protected Health Information (PHI) or other sensitive or confidential information is allowed, including when not connected to a network (e.g. on unconnected mobile devices). | | |
| SLN15 | 1 | 70 | SLN15.1.70 | Identity Management Requirements | P15.15 | The Solution shall encrypt all storage of all passwords using a one-way hash or other equivalent functionality to minimize damage from a security breach. | | |




**History:**
**EP original: 1/29/2013**
**Chase Heath: 3/21/13**
**EP: 3/22/2013**

Internet Prevention System (IPS)

# HEALTHCARE ENTERPRISE SERVICES PLATFORM

## Health Benefits Exchange View

**Non Production Environments (Development, Testing and Training)**

Version 3 05242013

**Architectural Requirements**

1. Segregate application services and installs (minimize running everything on one server in production, staging or Disaster Recovery)
2. Clearly define security boundaries between users, web (dmz, WAN), application and database zones.
3. Design for quick and predictable vertical and horizontal scaling.
4. Vertical scaling through more cpu, mem, disk, virtual infrastructure
5. Horizontal scaling through load balanced web, application and database instances
6. Segregate database workloads based on usage. OLTP(Transactional), versus OLAP(Star Schema) versus Other(Security).
7. Testing is the only environment that is approved to have external internet traffic for SFTP or ESB service testing. No other external connectivity is allowed.
8. All interactions between autonomous applications will utilize Enterprise Service Bus for data access.
9. 100% virtualization using VMWare 5.X or higher.
10. All DMZ network traffic to traverse CGI Internet.
11. All traffic to traverse secure MPLS WAN network established and maintained by CGI between SOV and CGI data centers and vendors.
12. Development, Testing and Training are mirrors of each other.
13. Oracle database instances are separate virtual machines each with a single instance of oracle installed.
14. No high availability is required in non production other than VMWare vMotion will be in place and tested to mitigate hardware failures.

| | |
|---|---|
| GREEN = USERS | 2/4 CGI VM 2vCPU w/4GB RAM |
| YELLOW = VIRT SRVS | 4/8 CGI VM 4vCPU w/8GB RAM |
| PURPLE = WAN SECURITY ZONES | 8/16 CGI VM 8vCPU w/16GB RAM |
| RED = DMZ SECURITY ZONES | 12/32 CGI VM 12vCPU w/32GB RAM |
| BLUE = PHYS.SRVS | SAN GB CGI Storage In GB (DB & Apps/ COTS) |

## Web Server Zones

**Public Web DMZ (Citizen/SOV Entry)**

No Internet facing applications approved from Development Environment
Only Test ESB/SFTP traffic allowed in DMZ from Testing Environment
No Internet facing applications approved from Training Environment

**Private Web WAN (Partners/SOV Entry)**

| | | | |
|---|---|---|---|
| Security Zone X VLAN X (Public) | liferay/OIM/FTP/ ESB1-http-01 | 2/4 | OneGate /LifeRay (HBE Portal) Weblogic-OIM Weblogic (10.3.6) OHS (11.1.1.7) x 2 (Authen/ Self Service Password) HTTP / ESB DMZ for external FTP/SFTP/FTPS Services |
| Security Zone X VLAN X (Private) | sieb-ws-01 | 2/4 | Siebel-SWE (Ports 80,443) Siebel CRM (8.2.2.2) OBIEE Web Front Ends (Ports 81,444) OBIEE (11.1.1.7) |
| Security Zone X VLAN X (Private) | BI/IDM/ECM/ LifeRay1-ws-01 | 4/8 | OneGate/LifeRay IdM/ self service WebCenter Content (11.1.1.7) |

**Private Web WAN(Management)**

| | | | |
|---|---|---|---|
| Security Zone X VLAN X | ESB/MDM/ESB/ Console 1-ws-01 | 2/4 | ESB (Console/Mgmt) Master Data Management (MDM) Siebel UCM (8.1.1.10) App.Mang.Web Frontend HTTP / ESB (Execution) (all internal ESB calls traverse these) |
| Security Zone X VLAN X | OWC-ws-02 | 2/4 | Oracle WebCenter Capture - Index/Scan/Commit, Forms/ Barcode recognition and Import (Windows IIS enabled) |

## Application Server Zones

**Siebel Product Suite**

| | | | |
|---|---|---|---|
| Security Zone X VLAN X | Sieb-appom-01 | 8/16 | Siebel Object Manager (AOM) Siebel CRM (8.2.2.2) Oracle Client 32bit (11.2.0.3) |
| Security Zone X VLAN X | Sieb-appgw-01 | 8/16 | Siebel Gwy/FS/NonAOM Siebel CRM (8.2.2.2) BI Publisher (11.1.1.7.0) Oracle Client 32bit (11.2.0.3) |
| Security Zone X VLAN X (Private) | Sieb-apprpt-01 | 2/4 | WebCenter Capture (10.1.3.5.1) WebCenter Distributive Capture (10.1.3.5.1) (Windows 2008) |

**Liferay/OneGate**

| | | | |
|---|---|---|---|
| Security Zone X VLAN X | Liferay-app1 | 2/4 | OneGate/Liferay Application Server Container WebLogic (10.3.6) |

**Enterprise Content Management (ECM)**

| | | | |
|---|---|---|---|
| Security Zone X VLAN X | Ecm/ Thunderhead 1-app-01 | 2/8 | Thunderhead / WCP /WLS Thunderhead (5.1) WebLogic (10.3.6) WebCenter Content (11.1.1.7) Secure Enterprise Search (11.1.2.2) |

**Master Data Management (MDM)**

| | | | |
|---|---|---|---|
| Security Zone X VLAN X | Mdm-app-01 | 2/4 | MDM/Cust Hub B2C,Data Steward/ Siebel UCM (8.1.1.10) OEDQ (9.0.7) Oracle Client 32bit (11.2.0.3) |

**Oracle Policy Automation (OPA)**

| | | | |
|---|---|---|---|
| Security Zone X VLAN X | Opa-app-01 | 2/4 | OPA Engine OPA (10.4.2) WebLogic (10.3.6) Windows Desktop Client Oracle Policy Modeler (OPM) |

**IDM,OAM,OVD,OID**

| | | | |
|---|---|---|---|
| Security Zone X VLAN X (Private) | OIM-app-01 | 2/4 | Oracle Access Manager WebLogic (10.3.6) OAM (11.1.2.1) |
| Security Zone X VLAN X (Private) | OAM-app-01 | 2/4 | Identity Manager WebLogic (10.3.6) OIM (11.1.2.1) SOA (11.1.1.6.3) |
| Security Zone X VLAN X (Private) | Dir-app-03 | 2/4 | WebLogic(10.3.6)–OVD(11.1.1.7) WebLogic(10.3.6)–OUD (11.1.2.1) |

**Business Intelligence/ETL OBIEE**

| | | | |
|---|---|---|---|
| Security Zone X VLAN X (Private) | BI/BI Scheduler/ ETL/FTP-appprod-01 | 3/8 | Weblogic – OBIEE WebLogic (10.3.6) OBIEE (11.1.1.7.0) ETL - ODI (11.1.1.7.0) OBIA (11.1.1.7.1) Oracle Client 64bit (11.2.0.3) WAN FTP/SFTP/FTPS Services |

**Oracle Enterprise Service Bus (ESB/OSB)**

| | | | |
|---|---|---|---|
| Security Zone X VLAN X | App-SOA-01 | 8/16 | WebLogic (10.3.6), WSM (11.1.1.6.3),SOA (11.1.1.6.3), BPM (11.1.1.6.3),AIA (11.1.1.6.0), OSB (11.1.1.6),BAM (11.1.1.6.3), OneGate Components |
| | App-SOAOSR0 | 4/8 | OSR / WebLogic |
| | App-SOAOER | 2/4 | OER / WebLogic |

**Administrative Environment (AM)**

| | | | |
|---|---|---|---|
| Security Zone X VLAN X | Siebie Mgt Appp/Siebie Console/App Mgt-MGMT0 | 2/4 | Siebel Admin Console Siebel Tools Siebel CRM (8.2.2.2) (Windows 2008) |
| Security Zone X VLAN X | App Mgt-SCR02 | 2/4 | Subversion Code Repository |
| | App Mgt-Build Svr03 | 2/4 | Build Server/ jDeveloper/ANT/ Maven |

## Database Server Zones

**Oracle Database (DB) Environments**

| | | | | |
|---|---|---|---|---|
| Security Zone X VLAN X | Oracle – db01 (OLTP) | 12/32 | 2,000 | OLTP Transaction Oracle (11.2.0.3.5 64bit) |
| Security Zone X VLAN X | Oracle – db02 (OLAP) | 12/32 | 2,000 | OLAP Analytics Oracle (11.2.0.3.5 64bit) |
| Security Zone X VLAN X | Oracle – db03 (Security) | 12/32 | 2,000 | OIM, OAM, Configuration metadata, Security Oracle (11.2.0.3.5 64bit) |

# HEALTHCARE ENTERPRISE SERVICES PLATFORM

## Health Benefits Exchange View

**Production Environments (Production, Staging and Disaster Recovery)**

Version 3 05242013

**Architectural Requirements**

1. Segregate application services and installs (minimize running everything on one server in production, staging or Disaster Recovery)
2. Clearly define security boundaries between users, web (dmz, WAN), application and database zones
3. Design for quick and predictable vertical and horizontal scaling
4. Vertical scaling through more cpu, mem, disk, virtual infrastructure
5. Horizontal scaling through load balanced web, application and database instances
6. Segregate database workloads based on usage. OLTP(Transactional), versus OLAP(Star Schema) versus Other(Security).
7. Physical Servers utilized in 3 separate Clusters of 2 Oracle RAC nodes each.
8. All interactions between autonomous applications will utilize Enterprise Service Bus for data access.
9. 100% virtualization using VMWare 5.X or higher other than 6 physical database servers.
10. All DMZ network traffic to traverse CGI Internet.
11. All other traffic to traverse secure MPLS WAN network established and maintained by CGI between SOV and CGI data centers and vendors.
12. Staging and Disaster Recovery environments mirror the production environment.

| | |
|---|---|
| GREEN = USERS | CGI VM 2vCPU w/4GB RAM |
| YELLOW = VIRT SRVS | 4/8 CGI VM 4vCPU w/8GB RAM |
| PURPLE = WAN SECURITY ZONES | 8/16 CGI VM 8vCPU w/16GB RAM |
| RED = DMZ SECURITY ZONES | 12/32 CGI VM 12vCPU w/32GB RAM |
| BLUE = PHYS SRVS | SAN GB CGI Storage in GB (DB & Apps/ COTS) |

## Web Server Zones

### Public Web DMZ (Citizen/SOV Entry)

| | | | |
|---|---|---|---|
| Security Zone X VLAN X (Public) | liferay/oim-https-01, liferay/oim-https-02 (2/4) | OneGate /LifeRay (HBE Portal) Weblogic-OIM Weblogic (10.3.6) (Authen/ Self Service Password) | |
| Security Zone X VLAN X (Public)) | esb-wsdmz-01, esb-wsdmz-02 (2/4) | HTTP / ESB DMZ for external | |
| Security Zone X VLAN X (Public)) | sFtp-01 (2/4) | FTP/SFTP/FTPS Services | |

### Private Web WAN (Partners/SOV Entry)

| | | |
|---|---|---|
| Security Zone X VLAN X (Private) | siebl-ws-01, siebl-ws-02 (2/4); Bi/idm/Ecm-ws-01, Bi/idm/Ecm-ws-02 (4/8) | Siebel-SWE (Ports 80,443) Siebel CRM (8.2.2.2) OBIEE Web Front Ends (Ports 81,444) OBIEE (11.1.1.7) IdM/ self service Enterprise Content Management (ECM) Web Frontend WebCenter Content (11.1.1.7) |
| Security Zone X VLAN X (Private) | liferay-portal-01, liferay-portal-02 (2/4) | OneGate/LifeRay |

### Private Web WAN(Management)

| | | |
|---|---|---|
| Security Zone X VLAN X (Private) | Esb/Mdm1-wsman-01 (2/4) | ESB (Console/Mgmt) Master Data Management (MDM) Siebel UCM (8.1.1.10) App.Mang Web Frontend |
| Security Zone X VLAN X (Private) | Esb/Mdm1-wsint-01, Esb/Mdm2-wsint-02 (2/4) | HTTP / ESB (Execution) (all internal ESB calls traverse these) |
| Security Zone X VLAN X | OWC-ws-02 (2/4) | Oracle WebCenter Capture - Index/Scan/Commit, Forms/ Barcode recognition and Import (Windows IIS enabled) |

### Temp Server

| | | |
|---|---|---|
| Security Zone X VLAN X | VTHIX1algUTL01 (2/4) | Jump Server for initial SW installs |

## Application Server Zones

### Siebel Product Suite

| | | |
|---|---|---|
| Security Zone X VLAN X | Sieb-appom-01, Sieb-appom-02 (8/16) | Siebel Object Manager (AOM) Siebel CRM (8.2.2.2) Oracle Client 32bit (11.2.0.3) |
| Security Zone X VLAN X | Sieb-appgw-01, Sieb-appgw-02 (8/16) | Siebel Gtwy/FS/NonAOM Clustering software Siebel CRM (8.2.2.2) BI Publisher (11.1.1.7.0) Oracle Client 32bit (11.2.0.3) |
| Security Zone X VLAN X | Sieb-apprpt-01 (2/4) | WebCenter Capture (10.1.3.5.1) WebCenter Distributive Capture (10.1.3.5.1) (Windows 2008) |
| Security Zone X VLAN X | Sieb-appcti-01 (2/4) | Siebel CTI Server (Windows 2008) |

### Liferay/OneGate

| | | |
|---|---|---|
| Security Zone X VLAN X | Liferay-app1, Liferay-app2 (4/16) | OneGate/Liferay Application Server Container OneGate/Liferay (3.2.1) Weblogic (10.3.5) |

### Enterprise Content Management (ECM)

| | | |
|---|---|---|
| Security Zone X VLAN X | Ecm/ Thunderhead-1, Ecm/ Thunderhead-2 (4/16) | Thunderhead (5.1) / WCP /WLS WebLogic (10.3.6) WebCenter Content (11.1.1.7) Secure Enterprise Search (11.1.2.2) |

### Master Data Management (MDM)

| | | |
|---|---|---|
| Security Zone X VLAN X | Mdm-app-01, Mdm-app-02 (2/4) | MDM/Cust Hub B2C,Data Steward/ Siebel UCM (8.1.1.10) OEDQ (9.0.7) Oracle Client 32bit (11.2.0.3) |

### Oracle Policy Automation (OPA)

| | | |
|---|---|---|
| Security Zone X VLAN X | Opa-app-01, Opa-app-02 (4/16) | OPA Engine OPA (10.4.2) |
| Security Zone X VLAN X | Client OPM (Not VM only Client Machine Install) | Windows Desktop Client Oracle Policy Modeler (OPM) |

### IDM,OAM,OVD,OID

| | | |
|---|---|---|
| Security Zone X VLAN X (Private) | OIM-app-01, OIM-app-02 (2/4) | Oracle Access Manager (OAM 11.1.2.1) |
| Security Zone X VLAN X (Private) | OAM-app-01, OAM-app-02, OAM-app-03 (2/4) | Identity Manager (OIM 11.1.2.1) SOA (11.1.1.6.3) |
| Security Zone X VLAN X (Private) | Dir-app-01, Dir-app-02 (2/4) | WebLogic(10.3.6)-OVD(11.1.1.7) WebLogic(10.3.6)-OUD (11.1.2.1) |

### Business Intelligence/ETL OBIEE

| | | |
|---|---|---|
| Security Zone X VLAN X (Private) | BI-appprss-01, BI-appprss-02 (4/8) | OBI Presentation Services Plugin / IBI Presentation Services / OBI Cluster Controller / WebLogic |
| Security Zone X VLAN X (Private) | BI-server-01, BI-server-02 (4/8) | OBI Server / OBI Scheduler / OBI Cluster Controller |
| Security Zone X VLAN X (Private) | BI Scheduler/ESI FTP-app-01, BI Scheduler/ESI FTP-app-02 (2/4) | WAN FTP/SFTP/FTPS Services ETL) |

### Oracle Enterprise Service Bus (ESB/OSB)

| | | |
|---|---|---|
| Security Zone X VLAN X | App-SOA-01, App-SOA-02 (8/16) | OSB / BPM / Coherence / BAM / Healthcare Adaptor / HIPAA Accelerator / WebLogic / FTP |
| Security Zone X VLAN X | App-SOAOSR0, App-SOAOSR1 (4/8) | OSR / WebLogic |
| Security Zone X VLAN X | App-SOAOER (2/4) | OER / WebLogic |

### Administrative Environment (AM)

| | | |
|---|---|---|
| Security Zone X VLAN X | Siebla Mgt App / Siebla Console/ App Mgt (2/4) | App Mgmt for Siebel Siebel Admin Console (Windows 2008) |

## Database Server Zones

### Oracle Database (DB) Environments (2,950)

| | | |
|---|---|---|
| Security Zone X VLAN X | RAC Cluster 1 db-RAC1-02 (12/32) | OLTP Transaction Cluster |
| Security Zone X VLAN X | RAC Cluster 2 db-RAC2-02 (12/32) | OLAP Analytics Cluster |
| Security Zone X VLAN X | [illegible] (12/32) | IDM, OAM, Configuration metadata, Security Cluster |

Note:
1. Scaling through additional RAC nodes where required.
2. Minimum RAC nodes per cluster shown (2).